

Officials Forecast Sales as Good as Those Last Year

By JOHN CIPPERLY

Croplife Washington Correspondent

WASHINGTON—U.S. Department of Agriculture officials here see little reason to fix sales judgment for the plant food industry for the coming year on past farm income and fertilizer sales curve relationships.

This was reported to Croplife last week by a responsible USDA official, who was asked for comments on the fertilizer situation report.

He pointed out that any correlations between farm income and plant food sales are generally based on an old discarded concept dating back the years when fertilizer sales were centered in the tobacco-cotton economy, and when the going got

(Continued on page 8)

Stauffer to Build New Petrochemical Plant at Louisville

NEW YORK—Stauffer Chemical Co. has announced plans for the construction of a new multi-million dollar petrochemical plant at Louisville, for the production of carbon tetrachloride, chloroform, methylene chloride and anhydrous hydrogen chloride.

The new plant will be located adjacent to Stauffer's existing Louisville plant, which currently produces carbon tetrachloride, perchlorethylene, anhydrous hydrogen chloride, and Acritet grain fumigant.

Structural and process engineering is now in progress. Construction will commence early next year for completion in 1957.

Fertilizer Industry Credited For Increased Food Output At New England Conference

By PAUL L. DITTEMORE
Croplife Editorial Staff

POLAND SPRING, ME.—The annual New England Fertilizer Conference, arranged by the National Plant Food Institute, was held at the Poland Spring House Sept. 29 and was attended by approximately 75 experienced station personnel and industry representatives.

The conference essentially was a "workshop" affair, with the programmed addresses more in the form of progress reports.

A. L. Deering, dean of the school of agriculture, University of Maine, in his address of welcome, said that the fertilizer industry should be giving much of the credit for the in-

USDA Sees 2.5% Increase in Nutrient Supply in 1955-56

WASHINGTON—Supplies of the three principal fertilizer nutrients in 1955-56 will exceed those of 1954-55 by about 2.5%, the U.S. Department of Agriculture estimates in its annual fertilizer situation report, issued last week.

The estimate is based on existing rates of production and trends in usage and foreign trade, rather than on capacity to produce, USDA said. Additional quantities of any one or

all three of the nutrients can be produced should the demand arise.

The situation report, 13th in an annual series, was prepared by A. L. Mehring, USDA fertilizer staff specialist, and Charlotte Graham, administrative assistant, Food & Materials Requirements Division, Commodity Stabilization Service.

The available supply of plant nutrients has increased each year since the 1938-39 season, and the trend

continues upward. Deliveries of nutrients to the fertilizer manufacturing industry during the 1954-55 season totaled 6.427 million tons, as compared with 6.215 million tons in 1953-54, or an increase of 3.4%.

It is currently estimated that the 1955-56 supply of nitrogen available for fertilizer use will approximate 2.35 million tons. This preliminary estimate, based on current rate of production and trend in usage and foreign trade, represents an increase of 4.4% over the 2.25 million tons reported for 1954-55.

Quantities of nitrogen that constitute the normal working stock in the hands of fertilizer manufacturers and ammonia distributors are not known precisely, but reports from the industry indicate that stocks are definitely larger than a year ago. New storage capacity, especially in the form of ammonia tanks, has contributed to this increase.

The 1955-56 supply of available phosphoric oxide is forecast at 2.3 million tons, or approximately the same quantity delivered in 1954-55. This estimate is based on production, trends in consumption and foreign trade in recent years. Much larger supplies can be produced in 1955-56, provided the extra demand does not occur during the spring rush.

The 1955-56 supply of potash available for fertilizer in terms of potassium oxide (K₂O) is estimated at 1.94 million tons. This represents an increase of approximately 4.3% over the 1.86 million tons available in 1954-55. This forecast is based on trends in production, use, and foreign trade rather than

(Continued on page 20)

Mississippi 4-H Club Member Produces 304 Bu. Corn Yield

Lamar Ratliff, 16-year-old 4-H member from near Booneville, Miss., reached his long-cherished 300 bu. an acre corn yield this year.

Lamar, who described his disappointment at not attaining that goal in several previous tries at the June meeting of the National Plant Food Institute, this year raised an official yield of 304.38 bu. on his acre.

W. Taylor Smith, Prentiss County agent, told Croplife that Lamar broke the land about nine times and applied 25 loads of barnyard manure last fall. He planted March 23, using 1,000 lb. 14-14-14 and 200 lb. ammonium nitrate. When the corn was knee high, he sidedressed with 300 lb. ammonium nitrate.

The corn was planted in 30-inch rows, spaced 8 inches, with 25,850 plants to the acre, Mr. Smith reported. It was cultivated twice. Lamar had a three-acre pond ready but rain was "just right," and there was no need to irrigate.

The corn was weighed and moisture tested and the yield determined

by the state agricultural college. It was of high quality, Mr. Smith said.

Lamar's previous yields were 179 bu. in 1950, 187 in 1951, 214 in 1952, 165 in 1953 and 218 in 1954.

In June, he told the National Plant Food Institute: "I still believe I can make 300 bu. on that acre and I'm trying again this year."

According to Mr. Smith, Lamar will be out to beat his own record in 1956.

Iowa Firm Installing Plant for Output of Fertilizer Solutions

NEVADA, IOWA—A contract has been let by the Continental Fertilizer Co. here for the installation of a complete and continuous automatic-control neutral solution fertilizer plant.

The contract was awarded to the J. C. Carlile Corp., Denver, for a plant to produce from 10 to 15 tons per hour of ammonium phosphate or complete liquid formulated fertilizers.

The plant will give complete automatic control in the manufacture of liquid fertilizers and will include a special Carlile unit for conversion of anhydrous ammonia to a neutral aqueous ammonia solution at an efficiency of 99+%, according to the Carlile firm.

New Wisconsin Firm

JANESVILLE, WIS.—Janesville Master Feed Mill, Inc., has been formed here, with an authorized capital stock of 2,500 shares of common at par value of \$10 per share, to conduct a fertilizer, feed and seed business. Incorporation papers were signed by Wilbert Thompson, 616 W. Milwaukee St., Janesville, Wis.

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Du Pont to Build Sulfuric Acid Plant in Ohio

WILMINGTON—The Du Pont Co. will build a new sulfuric acid plant on a recently acquired site in Ohio near the confluence of the Ohio and Greater Miami rivers about 20 miles downstream from Cincinnati, the company announced Oct. 4.

Construction is to start immediately, and the plant is scheduled to start operations in the latter part of 1956.

To be known as the Fort Hill Works, the new unit will be built by the Du Pont engineering department and will be operated by the company's Grasselli Chemicals Department.

It will replace the plant now operated by Grasselli at Lockland, near Cincinnati. The Lockland Works will continue operations until the new plant is in commercial production.

NORTH CAROLINA SALES DECLINE FROM YEAR AGO

RALEIGH, N.C.—Fertilizer sales in North Carolina during the fiscal year ended last June 30 totaled 1,797,942 tons, compared with 1,815,185 tons in 1953-54, according to the State Department of Agriculture.

Sales of mixed goods in 1954-55 totaled 1,482,536 tons, down from 1,490,646 tons the previous fiscal year. Sale of materials totaled 315,406 tons in 1954-55, compared with 324,539 tons a year earlier.

Leading grades in 1954-55 were 3-9-6, 300,661 tons; 4-10-6, 270,795; 5-10-10, 201,778; 2-12-12, 185,165, and 3-9-9, 159,291.

Included in the total for fertilizer materials were nitrate of soda 122,172 tons, ammonium nitrate lime mix 114,335, nitrate of potash 10,681, ammonium nitrate 10,371, calcium cyanamide 9,519, 18% superphosphate 9,404, 20% superphosphate 7,811, anhydrous ammonia 7,420 and

nitrogen solutions 7,054.

The department also announced that sale of agricultural liming material and landplaster during the first half of 1955 totaled 189,706 tons. This included 157,492 tons of liming material, 24,233 tons of landplaster and 7,981 tons of liming material with potash.

New Jersey Pesticide Dealer Meeting Set

NEW BRUNSWICK, N.J.—A first hand account of 1955 research and recommendations for 1956 will be presented at a conference for pesticide dealers to be held Nov. 16 at Rutgers University.

TO ENCOURAGE INDUSTRY

COLUMBIA, S.C.—Encouragement will be offered the development of more "agricultural industry" in South Carolina, it has been indicated by R. M. Cooper, who has returned to direct the South Carolina Development Board after several years' interval.

Dealer Sentenced for Violating Warehouse Laws

COLUMBIA, S.C.—W. C. Cassels, a fertilizer dealer at Johnston, S.C., has been sentenced to four years in the state penitentiary for violating state warehouse laws, and a co-defendant, E. H. Crosland, was sentenced to three years, suspended, and five years' probation.

Indicted with Mr. Cassels and Mr. Crosland was J. Roy Jones, state agriculture commissioner, who did not stand trial. Mr. Jones has been ill since suffering a paralytic stroke some time ago.

The defendants were accused of issuing false warehouse receipts showing storage of fertilizer in warehouses where there was "little or none" of the amount shown on the receipts. It was alleged that the receipts were used to obtain a \$75,000 loan. The receipts are guaranteed by the state. Mr. Cassels and Mr. Crosland pleaded guilty to one count of the indictment.

Net Earnings of Grace Gain 29% In First 6 Months

NEW YORK—W. R. Grace & Co. has reported a 29% increase in earnings per common share for first six months of 1955 over the corresponding period for 1954.

In its semi-annual report to shareholders, signed by Charles E. son, chairman of the board, and Peter Grace, president, the company said net earnings per share computed on the average number of shares outstanding, were \$2.14 for the half of 1955 as compared to \$1.66 for the similar 1954 period.

Total net income amounted to \$426,664 against \$6,757,000 for first half of 1954. Improved earnings from chemical operations and Chemical Line were cited.

Including the century-old company's equity in earnings in excess of dividends received from unconsolidated subsidiaries and 50% owned companies, total earnings per common share for the six-month period amounted to \$2.32 for this year against \$1.87 in 1954.

"Chemical operations," the semi-annual report said, "contributed substantially to the improvement in earnings. The Dewey & Almy Chemical Co. Division's sales and earnings continued the sharp upward trend which began in 1954.

"The Davison Chemical Co. Division also reported somewhat higher earnings. Increased sales of Division's triple superphosphates certainly offset the general weakness in demand for mixed fertilizer products.

"In addition, Grace Chemical made its initial contribution to sales and earnings. Last year, its plant was under construction and operating expenses were absorbed by 1954's consolidated net income."

Velsicol Announces New Heptachlor Label Acceptances

CHICAGO—Velsicol Chemical Corp. has announced that the Department of Agriculture has granted the following new label acceptances for heptachlor insecticides.

Heptachlor 2E, heptachlor 25% wettable powder, and heptachlor 2½% dust or granular for the control of wireworms on beans and soybeans.

Heptachlor 25% wettable powder or heptachlor 50% wettable powder for seed or planter box treatment for protection of planted wheat and seedlings from injury by wireworms, white grubs and cutworms.

Heptachlor 2E, heptachlor 25% wettable powder, and heptachlor 2½% dust or granular for the control of black vine weevil (*Brachyrhinus*) on Taxus and other nursery stock.

Heptachlor 25% wettable powder or heptachlor 50% wettable powder for the protection of planted sorghum seeds and seedlings against kafir ant and false wireworms.

Miguel Tegtmeyer Resigns as Head of Synthetic Nitrogen

NEW YORK—Miguel Tegtmeyer has resigned as president of the Synthetic Nitrogen Products Corp.

Mr. Tegtmeyer has long been associated with Synthetic. From assistant to the president in 1933, he became secretary, a director in 1935, vice president in 1940, executive vice president in 1945 and president in 1954.

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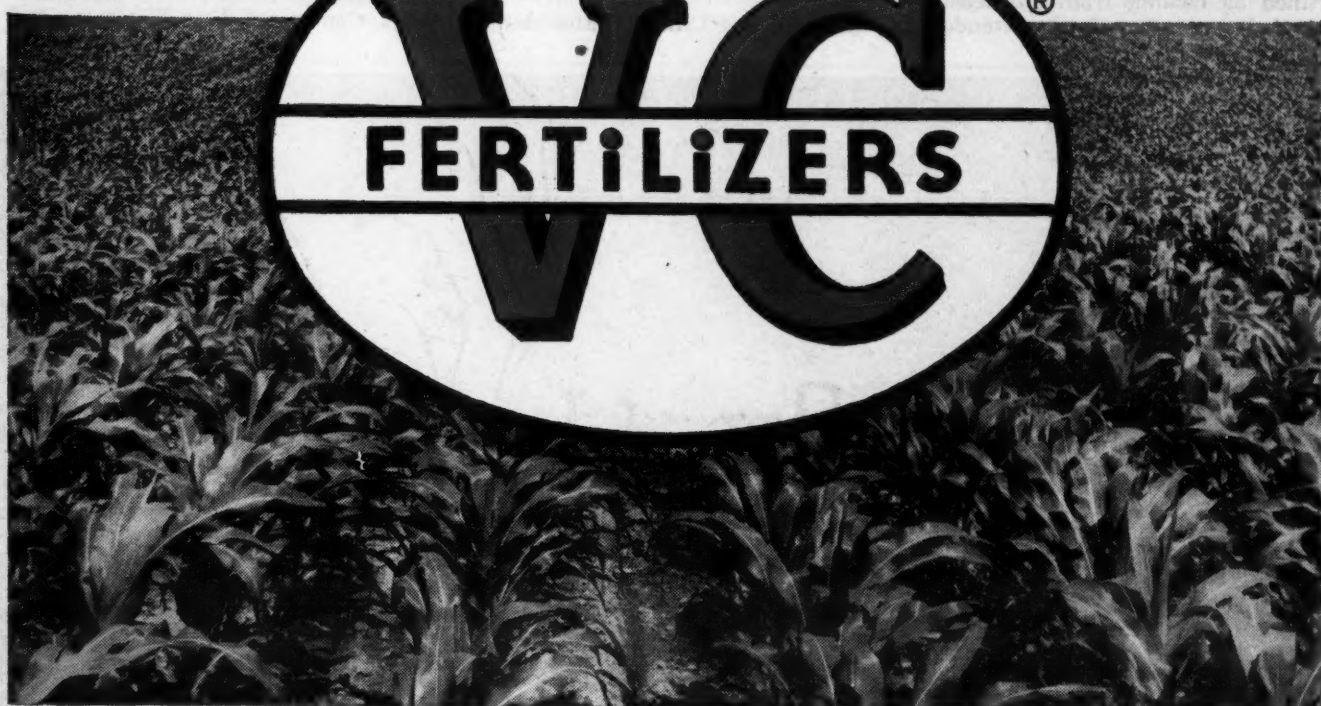
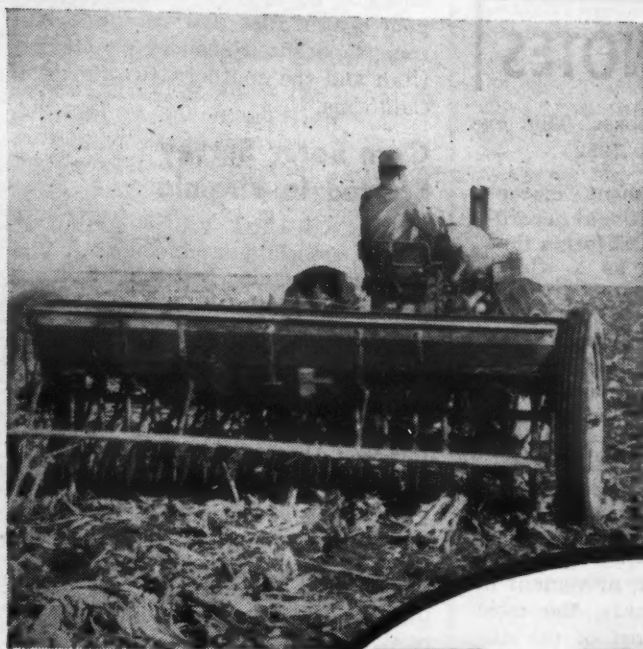
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INSECT AND PLANT DISEASE NOTES

2 Counties Added to Pine Blister Rust Area

WASHINGTON — Two California counties—Calaveras and Tuolumne—have been removed from those designated as noninfested with white-pine blister rust in federal quarantine regulations aimed at preventing the spread of this white-pine destroyer, the U.S. Department of Agriculture has announced. The finding of infections on either white pine trees or currant or gooseberry bushes is responsible for the changed status of these two counties. The amended quarantine regulations were effective Sept. 30.

Another amendment to the regulations restores an exception that allows movement of white pines into noninfested states when the trees are certified as coming from a disease-protected nursery and are intended

for reforestation purposes. This exception was revoked in 1952.

A further amendment discontinues the special treatment accorded a small portion of California that had been designated as a white-pine blister rust control area. A control area status is no longer considered necessary to supplement the state's control program. Instead state authority is being invoked to compel the removal of any planted currants or gooseberries—alternate hosts of white-pine blister rust—that might spread infection in the former control area.

The regulations continue the embargo on all interstate movement of European black currants, the most important alternate host of the disease, into pine-producing states.

Areas of the United States desig-

nated as noninfested with the white-pine blister rust now comprise Arizona, Colorado, Nevada, New Mexico, Utah and the southern two-thirds of California.

Corn Borer Survey Started in Virginia

BLACKSBURG, VA. — Arthur P. Morris, associate entomologist at Virginia Polytechnic Institute, has announced that a fall survey on the distribution of European corn borers has begun. It is planned in 10 southwestern and 10 northern Virginia counties. Damage by the insect to Virginia corn is expected to be higher this year than last.

Black turpentine beetles and Ips beetles have caused heavy damage to pine trees in some parts of the state.

Truck crop and vegetable insects currently causing trouble in eastern Virginia are Mexican bean beetles, corn earworms, bean leaf beetles, cabbage loopers, cutworms and stinkbugs. Control of these insects on the

late truck crops doubtless will be needed in some instances, Mr. Morris said.

Plant Diseases Noted in South Carolina

WASHINGTON — Downy mildew and anthracnose on cucumbers in Charleston County, South Carolina, are reported in the Plant Disease Situation, weekly publication of the Plant Industry Station, U.S. Department of Agriculture, Beltsville.

William M. Epps, South Carolina reporter, said that while neither disease had reached a point where serious losses had occurred by late September, either could become serious very quickly.

It also was reported that an experimental planting of muskmelons on the Clemson College Truck Station Farm was attacked so severely by downy mildew, black rot and Macrorhizium leaf spot that the crop is almost a total loss. The Plant Disease Situation is edited by Paul Miller.

Attack Launched on Sweet Potato Virus

BATON ROUGE—A three-pronged attack against the internal cork disease, one of the most pressing problems of the Louisiana sweet potato industry, has been launched by the Louisiana State University Agricultural Experiment Station, according to Dr. J. N. Efferson, director.

Dr. Efferson said that efforts to develop control measures are being intensified in a coordinated research program. This will involve work by plant pathologists in studies of the disease, by entomologists who will determine the part that insects play in its transmission and by plant breeders seeking to develop resistant varieties.

The internal cork disease was first observed in Louisiana in 1946. It has steadily increased since then and is now regarded by many as the most serious threat to the state's sweet potato industry. The virus disease causes corky black spots inside the sweet potato but there are no external indications of its presence.

Dr. Efferson said that the new work on the disease was made possible through additional federal appropriations for agricultural research and that approximately \$30,000 would be used by the experiment station this year.

Research on the disease is part of an expanded program being initiated by the station in an attempt to solve the more pressing problems of the state's sweet potato industry, Dr. Efferson explained. He said that an entomologist has been employed to devote full-time study to insects affecting sweet potatoes, a plant pathologist is being placed full-time on sweet potato disease work, and the sweet potato breeding program is being expanded both at Baton Rouge and at the Chase Station.

Japanese Beetle Threat Lessens in Michigan

LANSING, MICH.—Officials of the Michigan Department of Agriculture report that Japanese beetles are on the run.

The extensive eradication program last year, when 1,400 acres were sprayed by air, proved effective. State officials have conducted a large-scale trapping operation to determine the spread of the pest and found that beetles remain only in Lansing, Niles and Farmington Township in Oakland County.

The Japanese beetle threat in Michigan reached its peak last year, observes C. A. Boyer, chief of the state's plant division. The situation is much better this fall, he reports.

In contrast to the spraying program covering 1,400 acres last year,

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power for the spraying operation,
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es and the cities and other gov-
mental units pay for the cost of
insecticide.

Bread of Alfalfa Aphid Remarkable, Official Says

SACRAMENTO — The speed with
which the spotted alfalfa aphid has
spread throughout California is re-
markable, according to H. M. Armi-
tage, chief of the Bureau of Entomol-
ogy, California Department of Agri-
culture.

First discovered in San Diego in
February, 1954, the pest has spread
throughout all southern California counties
and through the rich agricultural
valleys of the state as far
north as Tehama County.

In late August infestation was
found in San Luis Obispo County,
representing the first indication of
spread northward along the coast.

Mr. Armitage said most of the
spread can be attributed to natural
flight aided by the wind. The initial
infestations evidently resulted from
the transportation of newly cut al-
falfa from infested areas outside the
state.

Both the University of California
and the U.S. Department of Agricul-
ture have sent representatives to
California and the Mediterranean area to
determine if there are natural en-
emies of the pest which might safely
be introduced.

Pink Bollworm Serious in Rio Grande Valley

EL PASO, TEXAS—The pink boll-
worm will reduce some cotton yields
in the Upper Rio Grande Valley by
as much as 50%, said Dr. Sloan
Jones, co-ordinator of the Pink Boll-
worm Research Program in Browns-
ville, Texas.

While making a recent inspection
of valley cotton farms, Dr. Jones said
the worst infestation was between
El Paso and Ysleta. On one field the
expected yield has been reduced from
three bales per acre to a half bale.
"It is a serious situation," he said.
One reason may be that the growing
season in the Rio Grande Valley is reaching
into this area, and in the small
cotton patches between houses, the
bolls were not plowed under. Another
possible reason is the mild winter
that the valley experienced."

The pink bollworm is no newcomer
to the valley, having first been found
there 35 years ago. During the last
few years, the infestation was com-
paratively light. And if this year is
serious, the next crop year may be
much worse, Dr. Jones said, particu-
larly if the leftover bolls are not
destroyed.

Field, Truck Crop Insects Reported

CLEMSON — Highlights from the
South Carolina Insect and Plant Dis-
ease Survey:

Velvetbean caterpillar and corn
earworm are sufficiently abundant
in some fields to justify control
measures. Cowpea curculio num-
bers in fields of cover crops. Cab-
bage looper causing considerable
damage to unprotected plantings of
early fall collards.

Pickleworm causing serious injury
to unprotected cantaloupes and
squash. Tomato fruit worm light to
moderate on fall tomatoes. Peach
tree borer causing defoliation of several
varieties. Dingy cutworm is the prom-
inent moth showing up in the Clem-
son trap light. Giant hornet has been
showing up in small numbers in the
Clemson trap light. This is the first
indication that this new invader of
the state is present in the Clemson
area.

Program Announced for Sanitation Short Course

PULLMAN, WASH.—The tentative
program for the annual Grain Sanita-
tion Short Course sponsored by Wash-
ington State College Oct. 12-14 for
grain dealers of the Northwest was
announced last week.

The course is sponsored annually
by the college in cooperation with the
Pacific Northwest Grain Dealers
Assn., Pacific Northwest Crop Im-
provement Assn. and the department
of entomology at the University of
Idaho.

The course will start Oct. 12 at
1:30 p.m. with a welcome by Dr. C.
Clement French, WSC president, and
Dr. L. L. Madsen, director of WSC's
institute of agricultural sciences.

Speakers will include George B.
Wagner, entomologist for Pillsbury
Mills, Inc., Minneapolis; David W.
Walker, entomologist at WSC; Guy
Bishop, WSC research assistant; Pete
Stallcop, PNWGD executive secre-
tary; L. J. Padgett, in charge of the

Khapra beetle control program of
the U.S. Department of Agriculture,
Oakland; D. A. Wilbur, Kansas State
College professor of entomology;
Howard Smith, associate entomolo-
gist at University of Idaho; Merrill
Sather, executive secretary of the
PNWCA; Gene Saxton, Lewiston
(Idaho) Exterminators; George Hud-
son, WSC professor of zoology, and
C. Stewart, USDA plant pathologist
at Pullman.

CONTEST WINNER

OKLAHOMA CITY — Joe Boyd
Thompson, 4-H club member, Man-
gum, Okla., won first place in the
statewide wheat fertilizer contest. He
harvested 35 bu. wheat per acre on
his 4-acre fertilized and irrigated plot
as compared with 22 bu. on one un-
fertilized acre.

DUSTER KILLED

HEREFORD, TEXAS—Ray Owen,
29, Chickasha, Okla., was killed near
here recently when his crop dusting
plane hit a guy wire on an oil derrick.

Blaw-Knox Installing Granular Unit at Land O'Lakes Plant

MINNEAPOLIS — The Chemical
Plants Division of Blaw-Knox Co. is
now installing a 25 ton per hour gran-
ular fertilizer production unit for
Land O'Lakes Creameries here. (See
Croplife, page 1, Sept. 19.) Process
consists of continuously screening,
weighing and metering raw materials
to a TVA-type ammoniator, granula-
tion, drying, cooling and screening.

Also included in the project are a
building to house the equipment, and
storage facilities for anhydrous am-
monia, nitrogen solution, sulfuric acid
and fuel oil. Complete dust and fume
scrubbing equipment is an integral
part of the operation.

Construction will be completed be-
fore the year's end to permit produc-
tion of all nitrogen grades of fer-
tilizer for the '56 season. The existing
batch mix system will be retained for
use on non-nitrogen grades.

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Melvin E. Wierenga to Head Calspray Foreign Sales Department

RICHMOND, CAL.—The appointment of Melvin E. Wierenga as manager of the new foreign sales department of the California Spray-Chemical Corp. at Richmond, Cal., was recently announced by A. W. Mohr, president of Calspray.

The new department will be Calspray's fifth operating department. Calspray subsidiaries in Mexico, Insectidas Ortho, S. A.; France, California Spray-Chemical Compagnie Francaise, S.A.R.L., and Canada, Ortho Agricultural Chemicals, Ltd.; as well as Calspray's own operations in foreign markets will be supervised by Mr. Wierenga.

Richard B. Auer, previously manager of Calspray's smaller foreign sales division under the marketing department, has been promoted to the new position of manager, Western Hemisphere-Orient division, foreign sales department.

Mr. Wierenga has been with Calspray, makers of Ortho agricultural chemicals, insecticides, fungicides, pesticides and fertilizers, for over eight years.

Starting as a sales representative in Central California, he was soon promoted to branch manager. Then he was promoted to district manager and transferred to the Middle West. Previous to his present appointment,

he was district manager in Calspray's Great Lakes area.

A native of Lennox, S.D., Mr. Wierenga attended Colorado A&M and South Dakota A&M, where in 1941, he received his B.S. in agriculture. He and Mrs. Wierenga and their 6-year-old daughter will make their home in the Bay Area. During World War II, Mr. Wierenga served as a naval commander in the European and Pacific theaters.

Cecil F. Kerr Named Chipman Representative

BOUND BROOK, N.J. — Chipman Chemical Co., Bound Brook, has announced the appointment of Cecil F. Kerr as sales representative in Michigan, Indiana and western Ohio. Mr. Kerr will make his headquarters at Bay City, Mich. He was formerly the farm and home development agent for Bay County, Michigan.

Joins MCA

WASHINGTON — F. Gordon Stephenson has joined the staff of the Manufacturing Chemists Assn. as assistant to the technical director. In addition to general technical assignments, Mr. Stephenson will supervise the association's chemical data sheet program. A graduate of Cheltenham College (England), he comes to MCA from the Cyril Bath Co. of Solon, Ohio.

Agreement Reached for Settlement of Florida Phosphate Strike Against IMC

CHICAGO — Negotiations were completed Sept. 30 for the settlement of a four-month-old Florida phosphate strike by the International Chemical Workers Union, Local 35 (AFL) against International Minerals & Chemical Corp.

The strike was climaxed September 28 when Louis Ware, president of the corporation, stated in a letter to the employees which also was published in full page newspaper advertisements that "immediately after Oct. 1, if the regular workers do not return we must proceed with recruiting new employees."

During the full strike period portions of the company's operations were manned by supervisory staff members. Limited production, therefore, was maintained throughout the period of the strike, which was punctuated by the dynamiting of the company's phosphate chemical plant near Bartow and other acts of violence and intimidation that finally resulted in the issuance of a restraining order by the Circuit Court in Polk County limiting picketing to not more than two pickets at each of four locations in the area of the company's properties.

During the closing days of the

strike a panel composed of three commissioners of the Federal Mediation and Conciliation Service met with company and union representatives and assisted in the successful completion of negotiations.

The contracts were settled on the basis of previous agreements without the loss of certain management functions for efficient operation of the business which the union sought to alter.

Terms included a four-year contract with International's Phosphate Minerals employees and a two-year contract with the company's Phosphate Chemicals employees.

When the local Chemical Workers Unions of eight other phosphate companies in the Bartow, Fla., area settled their strike, which lasted three months, the strike by local 35 against International Minerals continued through the fourth month. During this time the union demanded that the employees be given the unquestioned right to refuse work assignments and the direction of the work forces necessary to management, the company reported.

Such restrictive provisions were not included in the contracts negotiated by other local unions with the other phosphate companies in the field, a company statement said. Further, such restrictive provisions are not contained in any of the 44 separate union contracts International Minerals has with unions in the operation of its many plants and mines throughout the U.S. and Canada.

On learning of the completion of negotiations and the settlement of the strike, Mr. Ware said,

"I am very happy to learn that after these four long months of strike and unfortunate incidents negotiators for the company and the union have reached a settlement."

"The long-term agreements now give assurance of industrial peace and stability of employment at good wages and working conditions, and are advantageous for these reasons to employees, the company, its stockholders and customers and the general public."

"Confidence of our management in the future of phosphate chemicals operation in Florida is indicated in the fact that International's board of directors recently has appropriated in excess of \$500,000 for new expansion at the Bonnie phosphate chemicals plant."

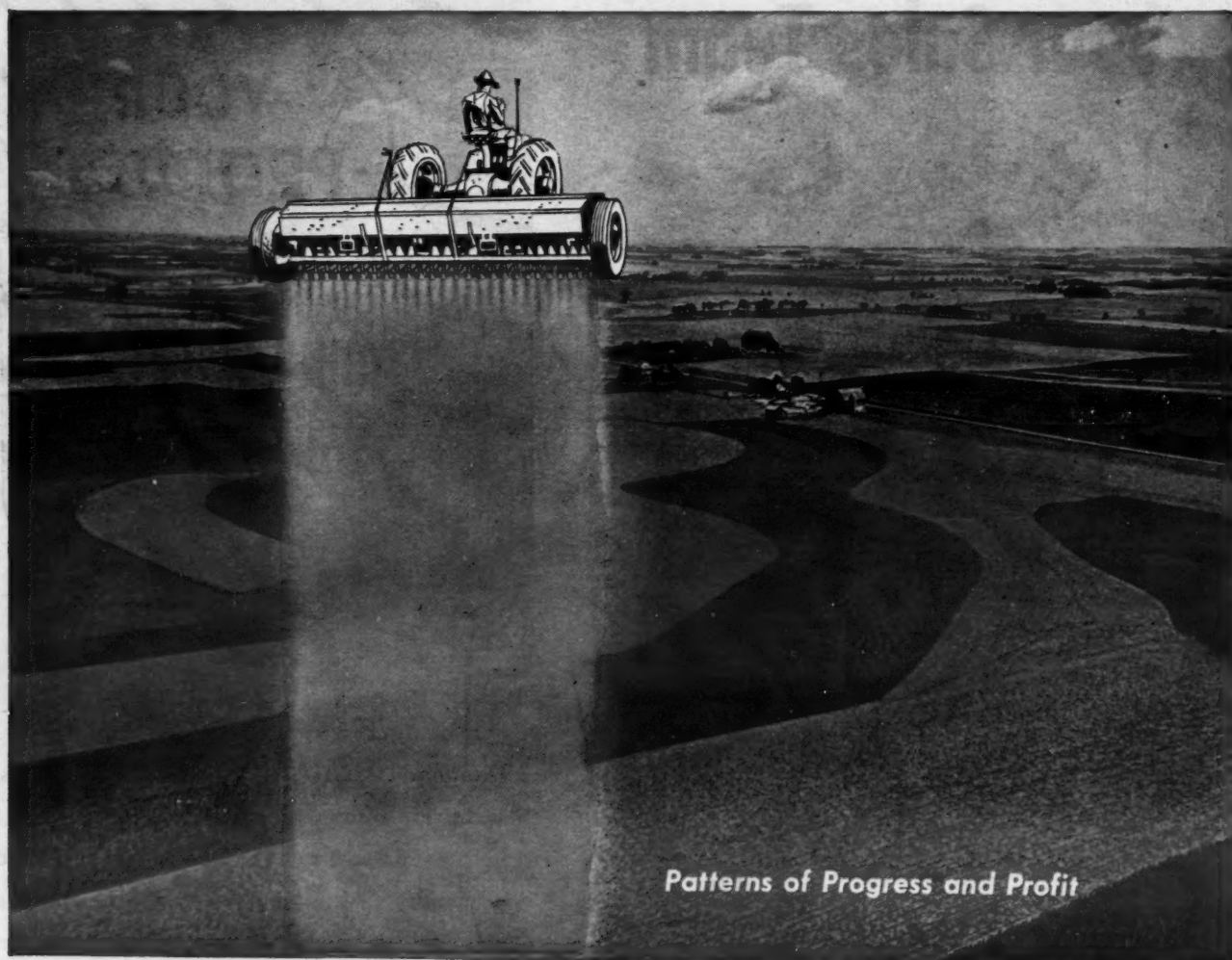
"This first step of a long range program provides for substantial increases in the production of sulfuric acid, triple superphosphate and dicalcium phosphate, and in shipping facilities. In addition, plans are now being made to proceed with other construction work costing more than \$300,000 which was halted by the strike."

"Now that the strike has been settled I hope we can resume the harmonious relationship that always has existed between the company, its employees and the community, and work together in the best interests of all concerned."

Manufacturing Chemists Plan November Meeting

WASHINGTON — The 5th semi-annual meeting and winter conference of the Manufacturing Chemists' Assn. will be held at the Statler Hotel, New York City, Nov. 22.

According to the MCA, the all-day meeting will feature six panel discussions on management topics of special interest to chemical industry executives. Nationally known speakers will highlight the luncheon and banquet periods.



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Clark M. Munger

Clark M. Munger New Diamond Black Leaf Merchandising Manager

CLEVELAND — Appointment of Clark M. Munger to the newly-created position of merchandising manager of Diamond Black Leaf Co. was announced here recently by John W. Madady, general manager.

At his new post, Mr. Munger will be responsible primarily for coordinating and expediting the company's distributor-dealer merchandising program covering Black Leaf brand insecticides and herbicides used by commercial growers and home gardeners. At the same time, he will take an active part in planning and carrying out publicity, advertising, sales promotion and packaging activities directly relating to Black Leaf's merchandising efforts.

Mr. Munger, 33, comes to the Diamond Black Leaf organization from Barnes Manufacturing Co., Mansfield, Ohio, producers of plumbing goods, pumps and water systems, where he was advertising and sales promotion manager since July, 1954.

Previously, he was associated for nearly seven years with the small appliance division of Westinghouse Electric Co. at Mansfield. A North Carolinian, born in Winston-Salem, Mr. Munger in 1947 earned a B.S. degree in business administration from Bowling Green (Ohio) State University.

Henry De Armond Named Assistant to Treasurer American Potash

LOS ANGELES—American Potash Chemical Corp. has announced the appointment of Henry De Armond as assistant to the company treasurer, A. Adams, at the company's Los Angeles headquarters.

Prior to joining American Potash Chemical Corp., Mr. De Armond was with Hydro-Aire, Inc., of Burbank, Cal., and earlier, American Potash Co. in Los Angeles.

A native of Independence, Kansas, De Armond was graduated from the University of California at Los Angeles with a bachelor of arts degree and then studied law for two years at the University of Southern California.

Battelle Institute Completes New Building

COLUMBUS, OHIO—Battelle Institute here has completed a new \$4 million chemistry building. The four-story structure makes available 50% more space for chemical research.

HEADS SERVICE

BALTIMORE—Dr. Paul E. Nyman has been named director of Cooperative Extension Service of the University of Maryland.

Nebraska Fertilizer Group to Hold First Annual Convention

LINCOLN, NEB. — The annual meeting of the Nebraska Fertilizer Institute, Inc., will be held Oct. 31 at the Cornhusker Hotel in Lincoln, Howard W. Elm, executive secretary, has announced. It will be the first annual convention of the organization which was organized last Jan. 4.

The afternoon program, which will start at 2 p.m., will include reports by officers and committees; "Results of Experimental Work with Radio Active Phosphorus," Robert A. Olson, University of Nebraska, and "Results of the Soil Testing Program in Nebraska," Dr. Mark Weldon, University of Nebraska.

Howard L. Peterson, president of the institute, will preside at the afternoon session, and Richard E. Bennett, vice president, will preside at the evening banquet session. Banquet speaker will be Leo E. Orth, Farm Bureau

Service Co., St. Paul, who will talk on "Prescription Farming."

Committee chairmen are Fay P. Stewart, nominations; Frank J. Brady, resolutions; Mr. Bennett, membership, manufacturing; George A. Spidel, membership, retail; Edsel Barrett, constitution and by-laws, and Melvin Beerman, convention program.

Joins Fletcher

LOS ANGELES—Charles A. Barnett, veteran of 20 years in the aircraft industry, has been appointed vice president in charge of engineering and sales for Fletcher Aviation Corp., Wendell S. Fletcher, president, has announced. The firm is designer of the FU-24 "Utility" airplane for agricultural, passenger and utility use.

SOIL GROUP TO MEET

AMES, IOWA — The annual meeting of the Iowa chapter of the Soil Conservation Society of America will be held here Oct. 14-15.

Illinois Bankers to Look at Farm Problems

URBANA, ILL. — Illinois bankers will spend one day on the problems of agriculture before tackling their own problems in an agriculture-bank management conference at the University of Illinois Oct. 18-19. An address by Don Paarlberg, assistant to the secretary of agriculture, at a dinner meeting the first evening will highlight the agriculture program.

Other speakers on agriculture include farm economists L. H. Simerl, A. G. Mueller, W. D. Buddemeier and E. R. Swanson, agronomist E. H. Tyner and beef specialist A. L. Neumann of the University of Illinois College of Agriculture and Douglas F. Graves, agricultural chairman of the Illinois Bankers Assn.

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Wet-Strength Kraft	✓	
Water Repellent Kraft	✓	
Stak-LOK Super Rough Kraft	✓	
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Open Mouth Bags—sewn or pasted	✓	
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Flat Sewn Open Mouth Bags	✓	
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SALES OUTLOOK

(Continued from page 1)

tough price-wise the credit sources dried up.

This USDA official says that 1955-56 for the plant food industry probably will not be a boom year on the basis of current data. But he forecasts a year as good as last year—possibly a tough year—one which will probably make it difficult for the plant food salesmen and distributors to increase sales to old customers or to influence

For Sale Below Schedule:
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stand-patters to accept plant food use innovations.

And again with a but—he notes that the demand factor has shifted broadly in the plant food field. No longer does the cotton-tobacco economy determine the sales peak. The Midwest is the prime target today.

It is true, he comments, that farmers' cash income has shrunk. He is under acreage restrictions for the best crops for his best farm land. But, on the other hand, he has learned slowly that plant food produces more sales units per acre on his restricted acreage and on the substitute crops which will go into the diverted acreage.

Topping off this view, this official told Croplife that there is still sufficient margin of return on the basis of current farm income to warrant the continued or even expanded use of plant food materials.

This whole farm issue now unfortunately is being batted all over the lot by farm politicians who de-

mand that the drop in farm income be halted and boosted by a return of a 90% of parity support for the basic commodities of wheat, corn, cotton, tobacco, rice and peanuts.

It has been submitted to Croplife by shrewd farm observers present in the New Deal administrations that the present crop of congressional members and the state politicians has failed to note the shift in farm sentiment against the mirage of rigid high price supports.

The nation—and the farm community—is now in danger of being swept under in a falsely provoked wave of hysteria over the condition of the farmer. The politicians who are forecasting a farm revolt or a farm-led depression are talking against the best interests of the farmer and the nation, this source states.



Wallace J. Majure

Wallace J. Majure Appointed District Manager for Calspray

RICHMOND, CAL.—The appointment of Wallace J. Majure as district manager of the California Spray-Chemical Corp. was recently announced by H. J. Grady, vice president and regional manager of the marketing department for Calspray. From his office at Maumee, Ohio, Mr. Majure will supervise operations in the Great Lakes area.

M. E. Wierenga, previously district manager, has been appointed manager, foreign sales department, Calspray's home office in Richmond.

Mr. Majure has been with Calspray, makers of Ortho insecticides, fungicides, pesticides and fertilizers for seven years. Previous to his appointment, he was the branch manager in Virginia.

Naugatuck Has Plant More than 80% Back in Production

NAUGATUCK, CONN.—U.S. Rubber Co.'s Naugatuck Chemical Division here is now more than 80% back in production six weeks after being hit by hurricane Diane's flood.

The plant's chemical production units are completely back in operation.

The rehabilitation job was a major project. Large mills had to be taken down, cleaned and reassembled. More than 800 electric motors ranging to 750 h.p. had to be dried, cleaned. An electrical relay construction required replacement, many damaged floors and walls had to be rebuilt.

Emergency measures are still in effect for shipping finished goods receiving raw materials because Waterbury Branch Line of the New Haven Railroad servicing the plant has not been completely repaired. The plant is using a shuttle service of trucks and tank trucks between the plant and a temporary depot on New Haven's main line. Normal railroad service is expected to resume in November.

Chapman Chemical Co. Purchases Inventory Of Nashville Firm

MEMPHIS—The Chapman Chemical Co., manufacturer of agricultural and industrial chemicals and preservatives, has purchased the entire inventory of Premier Chemical Inc. of Nashville, it was announced here.

A. Dale Chapman, president of the concern, disclosed the company is opening a sales office and distribution point in Nashville, to be headed by Charles E. Nixon, former Premier president.

Will you accept an invitation?

Here's all you need to do:



- 1 Go to your empty bag storage and pick out a half-dozen Bemis-made bags at random...select them from various bales. Then do the same with any other makes of bags you may have with your brand.



- 2 Show the bags to a number of people—your customers, your salesmen, your banker, *anyone*—and ask them to pick out the bags with the *better printing* of your brand.

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A SPECIAL CROPLIFE DEPARTMENT TO HELP RETAILERS IMPROVE MERCHANDISING KNOW-HOW

North Carolina Firm Taps Growing Cattle, Dairy Industry As Fertilizer Sales Booster

By AL. P. NELSON
Croplife Special Writer

While tobacco and cotton crops are important in the Carolinas and annually require large tonnage of fertilizers, the spread of the beef cattle and dairy industry in these states has also opened the way for the sale of more fertilizer for pastures.

The Robertson Chemical Corp., branch at Raleigh, N.C., under the supervision of S. N. Carroll, has made a vigorous campaign to get this additional business. Part of the program is the offering of a bulk fertilizer spreading service for cattle raisers.

Because the South must often bring in most of the grains used in cattle feeding, the raisers try to utilize good pastures throughout the year to ease the feeding burden and the costs thereof. This makes the cattle raiser and the dairyman interested in preparing, seeding and fertilizing good pastures.

According to Mr. Carroll, many farmers are using 0-14-14 and 5-10-10 for permanent pastures. Many farmers use from 400 to 600 lb. per acre.

Mr. Carroll reports that normally most pastures are fertilized in February and in the fall. Thus with good liming, good seed and good fertilizer, the cattle raiser and dairyman can be assured of good pastures many months of the year, provided that rainfall is adequate.

"The continued growth of the cattle industry in this state means that bulk spreading for pastures should continue to increase in importance," states Mr. Carroll. "We are handling quite a bit of this work twice a year in the 25 mile radius which we service."

About two years ago Ford Times magazine, recognizing the increase of cattle raising and dairying in the Carolinas, published an extensive article about this trend, and used a two color picture from Mr. Carroll's files showing Raleigh area fertilizer spreading activities.

A fine service idea used by Mr. Carroll and staff is the issuing of a reprint of the North Carolina Agronomy Extension Notebook, duly authorized. The inside of the front cover of the reprint booklet says, "Our Policy . . . to supply the fertilizer recommended by your Experiment Station and Extension Service. . ."

The booklet is liked by farmers because it is complete. It lists the various types of crops grown in the state, the types of seeds and fertilizers which have worked best in certain soil areas and it gives directions for preparing seed beds, planting, etc.

"The booklet contains a great deal of information which the average farmer and cattleman wants to know," states Mr. Carroll, "and by reprinting the booklet we feel we can do our share to see that this vital information reaches more farmers. The agronomy department and the extension service work closely with farmers and give them a great deal of help which the farmers appreciate."

The booklet also defines and states the use of plant nutrients, and has a

fine section on weed control. In addition there are several blank pages at the back for note taking.

In addition to its fertilizer activities this Raleigh branch of the Robertson Chemical Co. also operates a cotton gin. However, the volume of business done by the gin has decreased somewhat in recent years due to cotton acreage restrictions and the influx of other agricultural activities in the area, mainly cattle raising and dairying.

North Carolina agriculture is now becoming more diversified than ever before, states Mr. Carroll. He believes that this will help farmers to maintain a better balanced production. It also means a greater use of fertilizers in the area to keep production of desired crops at profitable levels.

Clemson Publishes Forest Insect, Disease Bulletin

CLEMSON, S.C. — Forest Insects and Diseases of South Carolina Trees is the title of a bulletin prepared, printed and now being distributed co-operatively by the South Carolina State Commission of Forestry and the Clemson Extension Service.

The publication was authored by C. H. Flory, state forester, and W. C. Nettles and W. J. Barker, leaders of Clemson extension entomology and plant disease work and forestry work, respectively. Copies may be obtained from county agents, from representatives of the State Commission of Forestry, and from the Clemson Publications Department.

The bulletin describes the most common insects and diseases that attack trees in various stages of growth—from seedlings in nurseries to mature trees in both planted and natural stands. Recommendations are given for the prevention and control of these pests. In addition, reference is made to some important insect pests and diseases of shade and ornamental trees.

GOOD STRAWBERRY CROP

LEXINGTON, KY. — Strawberry growers in Monroe County, Ky., received \$78,000 from 11,268 crates of berries produced on about 100 acres, according to the University of Kentucky.

Insect Control on Cotton Returns Net Income of \$7 an Acre, Texas Study Shows

COLLEGE STATION, TEXAS — Farmers who fail to control insects on their crops are gambling with their year's work, and most lose rather heavily, according to C. H. Bates, farm management specialist for the Texas Extension Service. He reports that in a recent study of some 67 cotton farm operations, insect control did pay.

Of the 67 farms studied, 23 made two or more applications of insecticides. No insecticides were applied on 44 of the 67 farms. Where insecticides were applied, yields averaged 175 lb. lint cotton per acre. Where



SHOP TALK

OVER THE COUNTER

FOR THE DEALER

By EMMET J. HOFFMAN
Croplife Merchandising Editor

One salesman who never takes a day off and works for very low wages is the telephone.

One dealer with 30 years of experience in the farm supply field, Andrew Ingersoll of Mobile, Ala., is firmly convinced that the telephone is his most valuable salesman. He should know because he has used a telephone selling routine for the last 15 years.

He has supplied himself with three customer lists, divided according to the type of needs they have. He phones parts of his lists weekly, spending several hours on each of two days on the telephone.

He states that he uses a cordial tone but spends little telephone time in visiting with customers. Of course, he watches his telephone manners.

The number of years in which Mr. Ingersoll has used his telephone solicitation system are proof of the success he has in getting extra sales.

Telephone Manners

The key to successful order-taking by telephone hinges on good telephone manners, it has been determined by dealers who use the method. The experience of others has resulted in the formation of "six rules for saving time and money on phone calls," by one trade association. Here they are:

1. Know exactly why you are calling and what you hope to accomplish, before lifting the receiver.
2. Have all information at hand. Make notes if necessary. Avoid having to hurriedly hunt through files while on the phone.
3. Make your call when it is most likely the person called will be available. You will thus cut down on busy signals, "he's not in at the moment" answers, and waiting . . . which wastes your time.
4. Don't beat around the bush or wander off into trivial, unimportant remarks. Form the habit of saying what you have to say in clear, concise, understandable language.
5. Be sure you haven't omitted any essential facts which bear on the matter under discussion. Avoid the necessity of a second call to give or get information which was forgotten on the first.
6. When the purpose of your call is accomplished, conclude it. Don't hang

(Continued on page 10)



By RAYMOND ROSSON
County Agent, Washington County, Tenn.

Come look; what do we see? Go with us most anywhere in this good old U.S.A. country and stand on a hill-top at this season of the year . . . let's stand there and see what we can see . . . let's stand there long enough to think a little too.

We can see, first of all, "God's Handiwork" . . . autumn . . . that flows like a tide across the land of our fathers . . . our land . . . it creeps down the mountains in a haze of color . . . it strides across the meadows and plains in a foam of Autumn blossom . . . it rustles through the trees on the hillsides and whispers down the valleys with a southward rush of wings.

Not only can you see Autumn . . . you can hear it . . . you can feel it . . . you can smell it.

Autumn finds the hay in the mow for the beef and dairy cattle . . . the corn in the bin for the pigs and chickens . . . the oats, barley and wheat in the granary for bread, seed, and poultry feed . . . it finds the canned fruit, vegetables, as onions, potatoes, turnips in the cellar . . . and the deep freeze bursting at its sides with choice cuts of pork, beef, not to mention the friers, frozen fruits and berries.

You can see from this hilltop, good roads heading straight toward town, with trucks carrying that precious surplus not needed on the farms . . . this food stream means much to people in towns and cities . . . it means even more to the hungry in distant lands.

Suppose there were no surpluses . . . suppose our farmers were not producing enough for America.

All of us can see a lot from this hilltop . . . and regardless of what happens this winter and in 1956 . . . all of us must see America.



The rain was coming down steadily that fall morning, when Herman Koss, a fertilizer dealer from over Waterville way, came into the farm supplies store of Schoenfeld & McGillicuddy. Herman, a stocky, red faced, jovial fellow, who almost always chewed on a cigar, liked a joke now and then, plus a good time, but he was also a hard worker and had a successful business.

"Hi, Oscar," he grinned, showing a couple of gold teeth. "You fellows gettin' rich over in this neck of the country?"

Oscar, seated at his meticulous desk, swung around in his swivel chair. "You never get rich in this business, with so many price cutters and chiselers around. Collections are harder than ever to make. Farmers just don't have the desire to pay on due dates any more. Cost of business is going up, and net profit is mighty slim. Ach, sometimes I think it would be best to sell out and live down South in a shack."

"Hey, you musta got up on the wrong side of the bed, Oscar," came back Herman. "You sure are down. Know what I do when I'm down? I get a joke book and read until I'm laughin' so hard I'm cryin'."

"I don't like jokes," Oscar said coldly.

"You don't know what you're missin'," Herman sighed. "And you're missin' a lot by not attendin' those fertilizer club meetings. We had a dandy last night. Did Pat tell you?"

"No," snapped Oscar, "he's still home sleeping. Hard telling when he'll get here. I'm always here at 6:45. What's the use of attending meetings if you can't get to work on time in the morning?"

"Huh, that's one of the privileges of bein' a boss. You can sleep late once in a while if you feel like it. And then you can work hard some days to midnight. Nobody'll stop you, that's for sure." And Herman's hearty laugh roared through the office.

Oscar kept silent. This was a signal

Praise the Lord And Pass the Plant Nutrients

ATHENS, TEXAS—I. B. Irons believes that if science can help the Lord, it can help him, too. This year Mr. Irons set aside one acre of corn to be given to the church. Ordinarily he made from 10 to 15 bu. corn to the acre.

Then, William H. Longstaff and B. J. Simpson from the Texas Research Foundation paid him a visit and asked if they could experiment with part of his field. Mr. Irons consented, and watched as they tested the soil then applied phosphorus, potash and nitrogen fertilizer.

When harvesting time came, Mr. Irons gathered 60 bu. corn to the acre. He intends to set aside the same acre next year, but will use fertilizer on all his fields. He says if fertilizer will help the Lord's Acre, it ought to help his also.

that he had visited too long. But Herman didn't notice.

"That was a great idea Pat sprung on us last night," went on Herman. "The fellows sure liked it. We'll get lots of publicity on it."

Like a watchdog Oscar came to life, his grey eyes alert. "Ach, that Pat. Another idea? Is it going to cost something?"

"Take it easy, Oscar, take it easy," cautioned Herman. "People get high blood pressure when they get so red in the face. Sure this idea of Pat's costs somethin', but in the long run, no. It'll bring in more business for all of us who sell fertilizer."

"Sounds like Pat's soft soap," Oscar said cynically. "I have heard that kind of song before."

"Well," smiled Herman, "It sounds okay to me. Pat says there are 31 fertilizer dealers in the county, and we should all get together and offer a \$1,000 scholarship to the best qualified farm boy who wants to go on to ag college."

Oscar looked puzzled. "How will that sell fertilizer?" he asked coldly.

"Lookin' for the old business return, eh, Oscar?" Herman chuckled. "Well, I ain't finished. If the 31 fertilizer dealers chip in \$32.75 each we can offer that scholarship and we'll get reams of publicity throughout the county and maybe the state. And we kin stir up plenty of interest in fertilizer."

"How?"

"Well, Oscar, we are gonna set a registration date for every boy or girl who wants to try for that scholarship, and then we'll have some experts on hand to tell them about all types of fertilizer. We'll show movies, and then we'll ask the entrants to write an essay on how farmers can use fertilizer to good advantage."

"We are all doin' that now in our expensive ads," Oscar put in sourly.

"But each boy and girl who enters is judged on his over-all interest in agriculture and school grades, etc.," went on Herman, flicking ashes off his cigar, "and before the contest closes every entrant has to sell 10 tons of fertilizer."

"Who gets those fertilizer sales?" asked Oscar quick as a rifle shot.

"Hey, don't get excited," warned Herman, "they are going to be parceled out to every dealer in the plan. We'll all get our share of the business. The reason we want the entrants to sell 10 tons each is so they'll really realize how important fertilizer is in a crop program."

Oscar frowned. "Ach, why do we always have to have so much hoopla to sell fertilizer? Why can't we just sell it like we used to? Just have it in stock, and if a man comes in and wants it, then sell it to him at the regular price—no discounts—and get cash on the barrel head."

"Why?" echoed Herman. "Because nowadays people and farmers, too, got so darn much to see and think about, and do, that you have to stick stuff right under their

nose all the time, and yell about it, before they buy. That's why."

Oscar looked unconvinced.

"Look at it this way," Herman implored. "Suppose there is a good looking blond in town. But she doesn't comb her hair, or wash her face for two weeks and she wears the same wrinkled dress. Will any man look at her when she walks down the street? Will she get some fellow for a husband? No."

"Yeah, but what has that got to do with selling fertilizer?" Oscar asked stubbornly. "That's what I'm interested in."

"But," Herman's eyes danced merrily, "if this blond she goes to a beauty parlor and spends a few bucks to get cleaned up, puts on some lipstick and powder, buys a new skirt and one of these come-close-to-me sweaters, you know, why when she walks down the street they whistle so much at her you think a band is followin' her."

Oscar still looked puzzled.

Herman sighed deeply. "Listen, Oscar, a fertilizer dealer nowadays has to slick up, has to dress up his store and his way of doing business. He has to advertise and do other things to get the attention of the farmer. It's the way of the world."

"Well, I see it's no use to talk to you. I might as well go up to Pat's house and pull him out of bed. He and I are supposed to go out visiting dealers today and collect \$32.75 each for that scholarship. So get that check ready for when I come back later."

OVER THE COUNTER

(Continued from page 9)

around like a departing dinner guest at the front door who doesn't know how to say goodby.

News for Customers

We're indebted to "Timely Topics," a publication for customers of the Tunis Brothers Co., Kennett Square, Pa., for the story concerning the used car dealer who advertises that he "sanitizes" cars before they're sold. "We guess that this means that they disinfect them," comments the newspaper. In conclusion, states the item, "If it'll help any we will dip any used piece of machinery we have here in straight carbolic acid."

The publication, written in a light vein, makes entertaining as well as informative reading. The September issue, incidentally, contains a story on a fertilizer demonstration which the company conducted and a picture story on a plowing demonstration.

"We probably have more square feet of parking space per customer than any store in Chester County and we are looking for more customers to fill the space," quips one article.

Amusing also is the Timely Topics masthead which, among other information, discloses that the "Who" of Tunis Brothers, "in order of their disappearance at 5:30 p.m." is Robert W. Tunis, president; Richard M. Tunis, treasurer, and Isabelle R. Tunis, secretary.

Expert Sees Big Increase in Farm Irrigation Systems

LITTLE ROCK—Dr. Gerald Williams, former agronomist at Purdue University and now manager irrigation research for Olin Mathieson Chemical Corp., predicts that another decade sprinkler irrigation systems will be as commonplace on American farms as combines are today.

Sprinkler irrigation has spread every section of the country. In 1954 less than 250,000 acres in a few isolated areas were sprinkler irrigated. This year, it is estimated, 3.5 million acres are being irrigated by the method.

Farmers who try it soon learn to look to irrigation—which they measure and control—as the basic source of moisture for their crop. Dr. Williams says. They look up any rainfall as supplementary to irrigation.

A national sales meeting of irrigation specialists was staged in Little Rock last month by Olin Mathieson.

Dr. Williams pulled three working farmers from their fields for a day and let them tell irrigation salesmen what water does for field crops.

Riley Allen of Blackshear, Ga., said he produces 3,100 lb. cigarette quality tobacco per acre by using irrigation. The state average is about 1,200 lb. per acre. When Mr. Allen acquired his system in 1949, it was one of the first in the state.

J. W. Pruett of Inverness, Miss., several times has won the Mississippi five-acre cotton contest with yields ranging above four bales per acre.

Mr. Pruett added 13 inches of irrigation water to his cotton this year even though it was considered a wet year by some of his neighbors. Natural rainfall during the current growing season in the Inverness area was 14 inches.

Don Bezy of Sullivan, Ind., produced 130 bu. corn per acre on ten plots in 1954 by using irrigation supplemented by 12 inches of rain. In 1955 he anticipates producing 150 bu. per acre on 150 acres. His neighbors on similar land without irrigation commonly average half of that.

Talk of 200 bu. and even 300 bu. corn doesn't raise eyebrows among the farmers who have run test plots on heavily irrigated and heavily fertilized hybrid corn, says Mr. Bezy.

Irrigating pastures seems like wasting good water, time and money to the uninformed, says Dr. Williams. But the farmers who are doing it are getting some of the most amazing results of all.

"One of the nutritional barriers the centuries has been man's inability economically to increase protein content in plants," Dr. Williams says. "Now, we've found that by good farm management which includes following a balanced fertilizer program and using plenty of water, we can grow pasture grasses that are much higher in protein content than pastures not so treated."

SEEK WEED DISTRICT

FLOYDADA, TEXAS—The Floyd County (Texas) Farm Bureau is making a drive to establish a weed control district for Floyd County. According to bureau president, Chester Carthel, the county commissioners will aid in a series of educational meetings to acquaint the people with the need for a weed control district. Before such a district can be voted on, a petition with 50 names and a \$500 fee must be posted.

OUTSIDE SELLING

How Many Calls Can You Make Each Day? What Does It Cost?

By AL. P. NELSON
Croplife Special Writer

When the farm dealer considers the cost of personal calls on prospects in a trade area, one of the first things he needs to know is the number of calls which an outside salesman, whether a hired one or the dealer himself, can make in the average working day. And before that number can be arrived at, the dealer must figure out what type of calls he wants made. Obviously, the dealer who is armed with a list of 20 delinquent customers is going to have a difficult time in going to all of them in one day. Why? The reason is that he is not going to find some of those delinquent customers home. Some of those whom he does find in are going to pay promptly, it is true. Others, however, may be stubborn and argumentative. The dealer may spend up to a half hour with some customer, discussing some point of disagreement. It is easy to see that the dealer who travels the countryside some day not going to make 20 calls if he sticks solely to collections.

Now let us take the case of a route man who makes deliveries and tries to sell at the same time. He has had route men in fairly heavily populated rural areas tell him that they make up to 60 deliveries per day at individual stops.

In almost every case, they tell me, they make an effort to sell something. Even if the farmer husband is not at home, the route man will ask the farmer's wife or elder son or other relative if there is anything the farmer needs. A route man call seldom takes more than 10 minutes at the most; some take less. Occasionally one will take longer. A call every 10 minutes is six per hour or 48 per eight-hour day.

But that leaves no time for traveling. And travel is important, depending upon the state you live in. The route man in western Minnesota is not going to make as many individual route stops per day as the route man in more heavily populated New Jersey or Illinois.

Not so long ago I talked with several milking machine salesmen who also sell dairy equipment such as stanchions, water bowls, animal vacuums in addition to milking machines. They also service such equipment.

Men like this have their own trucks, they have territories mapped, and they make sales and service calls with a minimum of travel time. They work their territories systematically, and they have a larger trade area than most farm dealers serve.

These men tell me that they can make between 20 and 25 calls per day on farmers, taking into account the short and long calls, the waits, the visiting, etc. that go with every outside selling campaign. These outside salesmen, too, figure in their time for servicing milking machines on those calls. So, when they say they can make 20 calls per day, they know what they are talking about, for they keep accurate records.

Figuring an outside man's salary, his car expense, and his share of the firm's overhead, I think you will agree that it costs about \$20.00 a day minimum to maintain such a salesman on the road. This figure may be too low in some instances. If the salesman makes 20 calls a day, that figures out to approximately \$1 per call.

On a basis like this, how long would it require the dealer or a salesman to cover his entire territory, calling

on and making the acquaintance of every farmer in that trade area? Working a five-day week, the dealer could call on 100 farmers per week. This would amount to about 400 farmers a month. Many dealers do not serve more than that number. Some serve 500 to 600 farmers. But even so, this would mean a total cost of about \$600 to pay personal visits to 600 farmers.

Is this too high a cost for the dealer to bear?

It is claimed that it costs from 50¢

to \$1 to prepare, write and mail a first class letter today. Also, in newspaper and direct mail advertising, it does not take long to spend \$600. Therefore, the cost of visiting every farmer in the area and making his acquaintance and trying to win him for a customer does not seem to be exorbitant.

Much, of course, depends upon the salesman. If he knows how to sell and please, he can bring home a lot of extra sales on such a campaign and pay the cost of the program many times over. If he isn't such a good salesman he may not do any good—in that event the dealer had better spend his \$600 somewhere else.

There is an old saying about retail merchants to the effect that it is always wise to go "where the

business is." The dealer who conducts such an outside selling campaign is taking this philosophy to heart. He goes to the farmer and talks with him first hand. All things equal, this is the place to sell him more goods and services. With such a sales campaign the dealer can meet and sell to farmers who might not otherwise come to his store.

Every dealer has a market potential. This is business which lies within his trade area and which he has a chance of securing.

This analysis of the costs of such a program should encourage many a dealer to expand his business volume through outside selling. The costs of such a campaign are not as high as some may have suspected.

Croplife

Here's another way
LION IS HELPING YOU
sell more Nitrogen Fertilizer

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Homestead

PRAIRIE FARMER

THE MISSOURI FARMER

The Progressive Farmer

Farm and Ranch

THE FARMER

Nebraska Farmer

WISCONSIN Agriculturist

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Impressive, Big-Space Advertisements
are Appearing Month-After-Month
in all These Publications

Lion's Chemical Sales Division is working to make sure you sell more fertilizers. One way we help is by *consistent advertising* to farmers. This advertising emphasizes how plant foods can best serve the farmer by increasing his profits.

As for *quality*, you can build your own reputation on a solid basis when you depend on Lion, a leader in the field of petro-chemicals. You can depend on Lion for *uniform high quality* . . . always.

With two giant chemical plants producing around-the-clock, throughout the year, Lion, with its versatile and flexible manufacturing processes, is a dependable source of the most popular and economical types of nitrogen fertilizer materials.

It will pay you to feature and sell nitrogen fertilizers with the Lion emblem on the bag, or Lion's anhydrous ammonia. They sell easily, make consistent profits for you.

Look To LION—A Leader in Petro-Chemicals—
For Nitrogen Fertilizers

Lion Anhydrous Ammonia • Lion Ammonium Nitrate Fertilizer • Lion Aqua Ammonia • Lion Nitrogen Fertilizer Solutions • Lion Sulphate of Ammonia

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OF PRILLED AMMONIUM NITRATE

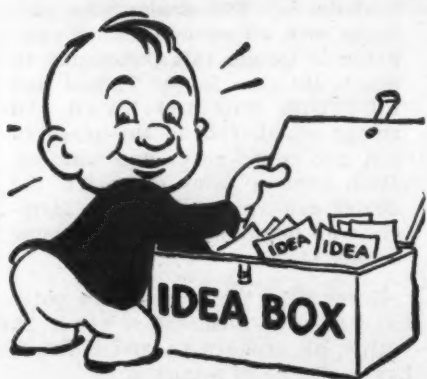
LION OIL
CHEMICAL SALES DIVISION



COMPANY
EL DORADO, ARKANSAS

Better Selling

Richer Sales Fields for Dealers



What's New...

In Products, Services, Literature

You will find it simple to obtain additional information about the new products, new services and new literature described in this department. Here's all you have to do: (1) Clip out the entire coupon and return address card in the lower outside corner of this page. (2) Circle the number of the item on which you desire more information. Fill in your name, your company's name and your address. (3) Fold the clip-out over double, with the return address portion on the outside. (4) Fasten the two edges together with a staple, cellophane tape or glue, whichever is handiest. (5) Drop in any mail box. That's all you do. We'll pay the postage. You can, of course, use your own envelope or paste the coupon on the back of a government postcard if you prefer.

No. 6318—Earth Borer

A new vibratory earth borer that makes a fertilizing hole without removing any soil is now available. Manufactured by the Mall Tool Co., the unit prepares soil for a more effective and economical method of fertilizing trees and shrubs. The self-contained unit consists of the 5½ h.p. model 2MG gasoline engine and a 7-ft. flexible shaft which drives a vibrating head. When the operator presses the throttle, the rotary motion transmitted through the flexible shaft into the vibrating head becomes a powerful throbbing action which bores roughly a 2-in. diameter hole 2-3 ft. deep in less than a minute. Holes can even be bored the entire length of the shaft. Fertilizer is then poured into the hole. To secure more complete details check No. 6318 on the coupon and mail it.

No. 6319—Scale

A new type automatic scale which is claimed to weigh sticky and non-free flowing materials as accurately as dry aggregate materials, has been announced by Richardson Scale Co.

A differential scale, the new unit automatically and continuously delivers a selected amount of material, the weight of which is the difference between a fully loaded and partially loaded scale. Called a weigh-in and weigh-out scale, the new unit is made up of a weigher, dial scale and totalizer. The weigher, consisting of a weigh hopper mounted on a short belt conveyor, is suspended from levers terminating in the dial scale. The belt conveyor provides a live-bottom for the weigh hopper, and facilitates the discharge of the hard-to-handle material. Heart of the system is the electronic controls. Secure more details by checking No. 6319 on the coupon and mailing it.

No. 6321—Portable Sprayer

A portable sprayer for such solutions as insecticides, fumigants, emulsions, deodorizing liquids, oils, polishes, floor dressings, moth proofers, and glass cleaners is now available from Spraying Systems Co. This new sprayer was designed for use in commercial plants. The No. 6000 sprayer, as it is called, weighs 1½ lb. and can be held and operated with one hand.

It's supplied complete with unbreakable plastic jar that is easily refilled by unscrewing from the cap. A companion unit, the No. 5870 chlorine sprayer, is identical to No. 6000, except that all metal parts that come in contact with chlorine solutions are made of stainless steel. To secure more complete details check No. 6321 on the coupon and mail it.

No. 6322—Nozzles

A line of nozzles for injecting nitrogen solutions, anhydrous ammonia and acids separately or in combinations has been developed by Thackston-Davis Supply Co. The injection nozzles are refinements of a basic single-manifold design developed by H. B. Davis, Spencer Chemical Company's South Carolina sales representative. By injecting ammoniating solutions approximately 1 in. from the mixer flights they provide better ammoniation than can be obtained from conventional spray pipes. By deflection and diffusion, solutions are brought into intimate contact with the superphosphate and potash. From four to eight nozzles are used, depending on the size of the mixer. Marketed as "DID" (diffusion, injection and deflection) nozzles, the line includes single-manifold nozzles for use of solutions; dual-manifold nozzles, for use of solutions and anhydrous ammonia; and triple-manifold nozzles, including one for utilizing from one to three materials. To secure more complete details check No. 6322 on the coupon and drop it in the mail.

Also Available

The following items have appeared in the What's New section of recent issues of CropLife. They are reprinted to help keep retail dealers on the regional circulation plan informed of new industry products, literature and services.

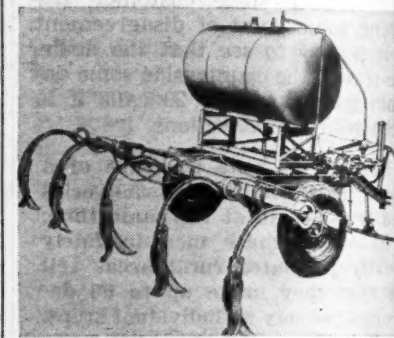
No. 6324—Fertilizer System

Now being demonstrated in various parts of the country is the new Flo-Mix system of fertilizing crops and pastureland. Organized to manufacture applying equipment, supply the basic fertilizer ingredients and to set up distributorships for Flo-Mix is the Flo-Mix Fertilizer Corp. The Flo-Mix principle is to mix the three essential ingredients—nitrogen, potash and phosphorus—on the applying equipment in the field as it is being applied into the ground. All ingredients are in their liquid form, utilizing anhydrous ammonia, phosphoric acid and potash. A setting of special dials regulates the mixture

and determines the proportion of the various ingredients. The manufacturer notes numerous advantages mixing a complete fertilizer in solution at the point of application and covers these points in an illustrated folder which is available to interested persons. The folder also describes the Flo-Mix equipment, including the Nitri-Flo trailer tank, Phos-Flo and K-Flo tanks and applicators. For more complete information check No. 6324 on the coupon and drop it in the mail.

No. 6313—Applicator

The John Blue Co. is producing new, trailer-type applicator for application of nitrogen solutions—the series "20-NS." The new applicator available with either applicators for underground application or a boom for surface application. The unit comes equipped with the newly developed model "NSF" fully enclosed nitrogen solution pump. The applicator is claimed to be suitable for almost every need and is available with a 14-ft. tool bar for row crop and top dressing or with a 21-ft. boom suitable for broadcast work. Up



75 gal. of solution per acre may be applied with the tool bar or up to 5 gal. per acre may be applied with the boom attachment. Tank capacities of up to 200 gal. are available. Either pressure or non-pressure solution may be used. Check No. 6313 on the coupon, clip and mail it to CropLife to obtain more complete details.

No. 6312—Plastic Liner

A booklet concerning the various applications of "JaLiner"—a built-in plastic liner for steel containers—is now available from Jones & Laughlin Steel Corp. The booklet describes the construction features of the liner and the ways in which the polyethylene liner can solve "hard-to-package" problems as well as routine uses. Also listed is a partial guide to the application of polyethylene in liquid and chemical solutions. Secure the booklet by checking No. 6312 on the coupon and dropping it in the mail.

No. 6320—Films

United States Steel Corp. announces the release of four new films. They are "Barns for Better Dairying," "The Suspension Bridge," "The Waiting Harvest," and "Sinews of the South." The latter film is available only in certain southern states. All films are sound, most of them are in color and available in 16mm. and 35mm. Running times vary from 12 to 38 min. Secure more information about these and other films produced by United States Steel by checking No. 6320 on the coupon and mailing it.

No. 6314—Sales Aids

Available from the Velsicol Corp. are three merchandising aids on household and garden insect control with chlordane. They are: Four-color, true-to-life pictures of an ant, carpet beetle, chigger, clothes moth, silverfish, spider, mosquito, roach and white grub (Japanese beetle larvae); designed for store display; a 12-page chlordane garden booklet with tips

Send me information on the items marked:

- | | |
|------------------------------------------------------|-----------------------------------------------------|
| <input type="checkbox"/> No. 5299—Storage Unit | <input type="checkbox"/> No. 6315—Imprinting |
| <input type="checkbox"/> No. 6307—Couplers | <input type="checkbox"/> No. 6316—Bulletin |
| <input type="checkbox"/> No. 6308—Fall Fertilization | <input type="checkbox"/> No. 6317—Liming |
| <input type="checkbox"/> No. 6309—Display | <input type="checkbox"/> No. 6318—Earth Borer |
| <input type="checkbox"/> No. 6310—Lawn Booklet | <input type="checkbox"/> No. 6319—Scale |
| <input type="checkbox"/> No. 6311—Wood Preservative | <input type="checkbox"/> No. 6320—Films |
| <input type="checkbox"/> No. 6312—Plastic Liner | <input type="checkbox"/> No. 6321—Portable Sprayer |
| <input type="checkbox"/> No. 6313—Applicator | <input type="checkbox"/> No. 6323—Equipment |
| <input type="checkbox"/> No. 6314—Sales Aids | <input type="checkbox"/> No. 6324—Fertilizer System |

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COMPANY

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CLIP OUT—FOLD OVER ON THIS LINE—FASTEN (STAPLE, TAPE, GLUE)—MAIL

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The Bulletin Board

No. 12 in a series from the Spencer Chemical Magazine, "Today's Fertilizer Dealer"



Fertilizer Dealer Gordon Covington, Jr. (left), visits with customers Jack Gatlin (on tractor), Alton Gatlin and J. F. Jones. Jack won second in the district with 6025 lint cotton, five acres; Alton won third behind son Jack, with 5907 pounds, and Jones won honorable mention.

Mississippi Dealer Finds Cotton Contest Pays Off

By TOM CAMPBELL

Spencer Representative for Mississippi

The spirit of competition is high among farmers in the neighborhood of Summit, Miss. Growing cotton is a sport there, as well as a living.

It isn't the greatest cotton country. In the Mississippi hills, this area is loaded with pines and dairy cattle, and cotton runs a poor third in the economy. But it's first in enthusiasm.

It has been rumored that some farmers have put on their cotton fertilizer at night, then burned the bags to keep folks from knowing what they were using. Gordon Covington (J. T. Covington & Sons) doubts this, but he does admit hearing of a farmer covering a truck of fertilizer to prevent detection of grade.

This friendly competition has paid off. In the 1954 Mississippi Cotton Contest, a state-wide classic, three of the five winners in the district (20 counties) were customers of the Covington's.

Because of the competition it's a little hard to pin down applications, but a winner confessed the other day. Jack Gatlin, who won the \$125 second prize in his district last year with 6,025 pounds of lint cotton on five acres, says he applied 900 pounds of 6-8-8 per acre before planting and in all, 400 pounds of ammonium nitrate.


Gordon visits his customers quite often and has the background for good recommendations. He has operated a farm, taught Vo-Ag, is an enthusiast for keeping posted and is the last word on cotton poisons.

This Covington store is a bright spot in merchandising. They have been using radio five times a week—the 15-minute Tennessee Ernie program transcribed, tying in merchandising with the store name.


They back this up with direct mail—a cleanly-produced, chatty little piece. It is sent first class to avoid clashing with junk mail. They spend from \$300 to \$500 a year, too, on newspaper advertising.

Gordon has reasons to sell fertilizer. He points out to farmers that they can get a lot more milk out of grass than sacked feed. He and his father, Gordon Covington, Sr., are improving on a firm that was big business not long after its conception in 1888 as a lively business.

Fertilizer has been handled in the store since 1918, and a good volume even then, but Gordon sees, with better merchandising and new findings, some big gains for fertilizer ahead.



To Fertilizer Dealers ONLY



SPENCER CHEMICAL COMPANY
 609 Dwight Building
 Kansas City 5, Missouri
 Gentlemen: I am a fertilizer dealer not presently receiving Today's Fertilizer Dealer magazine. Please send me a free subscription without obligation.

Name

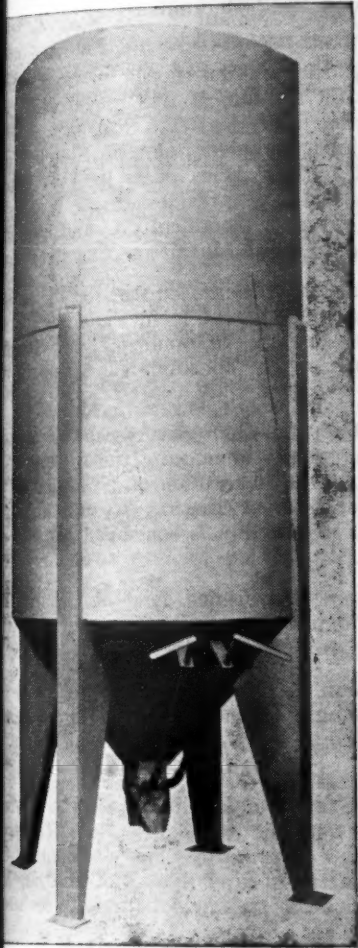
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garden practices; and a 16-page booklet entitled the Chlordane House-Insect Folder, which points out key "kill zone" points in the home and how to apply the product. The merchandising aids may be obtained without charge by checking No. 6314 on the coupon, clipping and mailing to Croplife.

No. 5299—Bulk Storage Unit

An all-steel bulk storage unit for fertilizer, minerals, rock phosphate and other free-flowing materials has been developed by the Andrews Machine Co. The unit is available in 10- or 25-ton capacities (capacity figured on material weighing 70 lb. per cubic foot.) and is fabricated in one unit on four legs, eliminating any assembly on delivery. The unit has a hopper bottom with a



opening control gate (not a sliding valve) for more effective discharge control. The bin is made of 12-gauge steel with 16-gauge steel used for the top. An 18 in. manhole and cover for ladders are located on the top with a ladder leading down the inside for access into the bin. Company officials said the unit serves companies selling bulk to provide to their customers and manufacturers storing ingredients. Check No. 5299 on the coupon and mail it to secure more information.

No. 6316—Bulletin

A new "Prentox Information Bulletin" has been published by Prentiss Drug & Chemical Co., Inc. It contains a suggested label outline for Prentox Pyronyl dust concentrate in combination with Rotenone and pyrethroids. Copies are available upon request. Check No. 6316 on the coupon and drop it in the mail.

No. 6323—Applicating Equipment

The line of anhydrous ammonia applicating equipment offered by the Hempster Mill Manufacturing Co. is featured in a new descriptive folder produced by the company. The folder illustrates and describes the various models of Liquijectors and reveals considerable information on the new Hempster Liquijector metering pump. Four several types of Liquijectors include those mounted on the new Hempster Model 5000 tool carrier and those which can be tractor-mounted. The simplicity of the dial setting and ease of lubrication are claimed to be two major features of the new meter-

ing pump. Completely visible and accessible from the outside, the dial can be quickly set without tools. All lubrication points are easily reached and the problem of remote control equipment on the meter has been eliminated by the use of a simple on-off clutch system, the literature explains. For a copy of the new booklet and other information check No. 6323 on the coupon and mail it to Croplife.

No. 6310—Lawn Booklet

"Lawn Culture with Liquid Fertilizers" is the title of a new booklet prepared by Victor Chemical Works. Victor officials said that the booklet is designed to help the dealer develop inquiries from prospective customers and that quantity booklet prices, covering only the cost of printing, are available. The dealer's name and address may be imprinted on the booklet. According to the Victor announcement concerning the booklet, any concern having tank trucks is a prospect for liquid fertilizer distribution but these firms need guidance in deciding what type of liquid fertilizer solution to offer. Secure more complete details by checking No. 6310 on the coupon and mailing it to Croplife.

No. 6311—Wood Preservative

The Carbolineum Wood Preserving Co. has just printed a new folder on its wood preservative, called by the trade name, "Carbolineum". Sections of the folder, available without charge, are devoted to, "What It Is, How to Use It, Where to Use It," and "What It Has Done." The product, according to the folder, is a wood stain, wood preservative and a termite stopper. No special skill or equipment is needed for application, which can be accomplished by brushing, spraying or dipping, according to the folder. Check No. 6311 on the coupon and mail it to this newspaper to secure the folder.

No. 6317—Liming Slide Rule

A slide rule has been devised by the La Motte Chemical Products Co. that can give the liming requirements for any plant, flower, tree, shrub, vegetable or farm crop grown in any type of soil. The plant group slide is positioned opposite the soil acidity reading and the amount of lime required for the best growing condition is read directly from the scale. Alum requirements for alkaline soils are also given. The rule has separate scales for small areas and for farm operations. A free brochure on the soil reaction slide rule is available. Check No. 6317 on the coupon and mail it to secure the brochure.

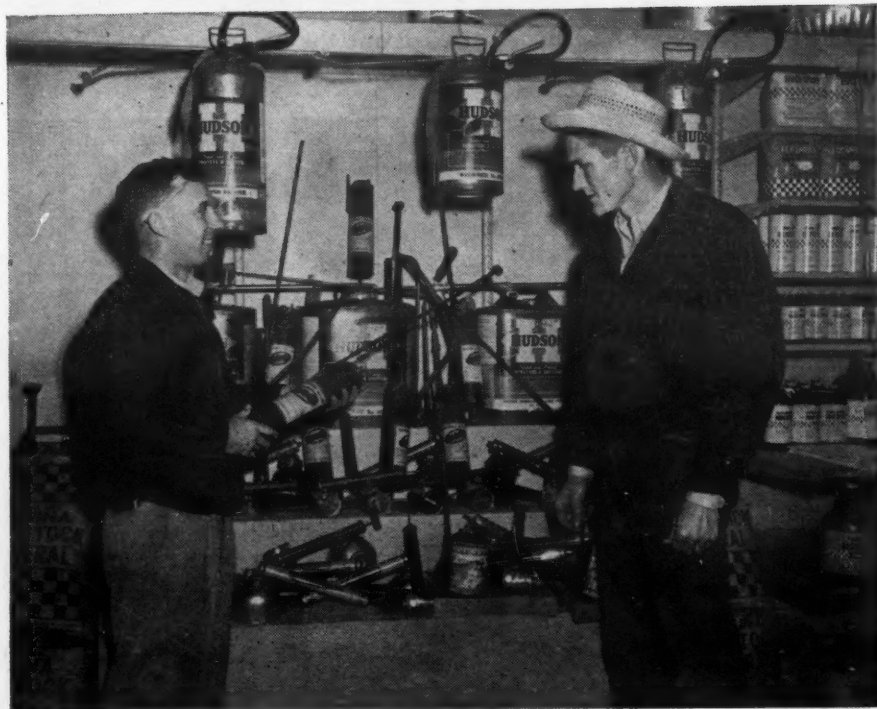
No. 6315—Label Imprinting

Imprinting variable data such as color, batch number, content, etc., directly on lithographed or preprinted cans or other cylindrical containers can now be done with a new machine designed by the Markem Machine Co. The new machine is claimed to permit imprinting specific legend in quantities as required, eliminating paper labels. Features claimed for the model 70AF machine are: Quick adjustment for marking cans ranging in size from 1/32 to 1 gal.; operating speed up to 1,500 imprints per hour; maximum imprint area of 2"x6". Secure more complete details by checking No. 6315 on the coupon and dropping it in the mail.

No. 6308—Fall Fertilization

A new folder, "Fall Fertilization with Vitrea," has been published by the Grand River Chemical Division, Deere & Co. The folder cites the advantages of fall fertilization: Speeds up decay of crop residues, eases the

(Continued on page 15)



FLORIDA STORE—A clerk, left, at the Checkerboard Feed Store, Palatka, Fla., is shown above demonstrating a spray outfit to a young gardener. A large display of sprayers, part of which can be seen in the background, is a feature of the store. Spray materials are stocked on nearby wall shelves.

Florida Retailer Features Sprayers, Spray Materials

By AL. P. NELSON
Croplife Special Writer

Spray materials and sprayers get feature display at the Checkerboard Feed Store, Palatka, Fla., where Phil Freeman and his staff try to capitalize on the interest of farmers, especially vegetable growers, on insecticides, fungicides and other materials to help them grow profitable crops.

This store has both hand and power sprayers, and uses a special wooden display unit against a side wall on which hand sprayers are shown.

The display unit, painted light green, has two step-up display levels on which sprayers are shown, which gives the customer a good choice of a sprayer for many purposes.

Mr. Freeman points out that in the Florida climate, with its practical absence of frost most years, and its high humidity, insects grow rapidly and can damage a crop extensively unless sprayed. Even small area gardeners take care to spray their crops as regularly as the large growers.

This means a large and steady business on pesticides for the store which has the stock and the sprayers. The spray materials are stocked on wall shelves next to the sprayer display, so there is an opportunity to make related sales to many customers.

With the advent of nutritional sprays, many gardeners are trying out these new methods of fertilizing, and have an added use for sprayers.

"All of our staff try to keep up with the new chemicals, so that we can impart the product knowledge to the customer," reports James Hudson, office manager. "Quite a few customers want to know the correct pesticide for this or that disease affecting vegetables, shrubs and fruit and we are careful to give each customer the right advice."

"A satisfied customer in this respect will come back many times during the year to buy—due to the fact that this area of Florida produces about two vegetable crops annually."

Members of the store staff also cooperate with the 4-H clubs and other

groups in the area, and thus have the opportunity to advise them about dry fertilizers, nutritional sprays and pesticides. The youngsters are eager to get this information and they put it to work on their own club projects and on larger plots of land owned by their parents.

Fertilizers and insecticides are also advertised by the Checkerboard Feed Store in newspaper ads and by direct mail. Some seasonal radio advertising is also used. Such advertising, plus good displays, helps the firm to do a good job on these two lines.

Fertilizer Problems Included in Rutgers Grassland Program

NEW BRUNSWICK, N.J.—Among speakers at Rutgers University's annual Grassland Conference on Oct. 21 will be Dr. Roy E. Blaser of Virginia Polytechnic Institute. He will discuss his specialty, grass-legume mixtures and seedings.

Members of the Rutgers staff will talk about fertilizer and soils problems, and separate discussion groups at the afternoon session will provide dairymen and livestock farmers opportunities to get answers to particular problems.

Dr. Milton A. Sprague, chairman of the Farm Crops Department and of the grassland committee, announces that subject matter will deal with fundamental problems and approaches to their solution. Any specific recommendations such as pounds of fertilizer or seed per acre will be incidental.

The conference will start with greetings from Dr. William H. Martin, dean of the College of Agriculture and director of the Agricultural Experiment Station.

SOUTH CAROLINA CROPS

CLEMSON, S.C. — The indicated per acre yield for corn and soybeans in 1955 is at an all-time high for South Carolina, and record crops of soybeans and grain sorghums seem assured. The second largest crop of oats in the state's history was made this year; the production of wheat is about the same as last year.

What's Been Happening?

This column, a review of news reported in Croplife in recent weeks, is designed to keep retail dealers on the regional circulation plan up to date on industry happenings.

Traffic experts in the fertilizer field said that the new rates announced by Interstate Commerce Commission on trainloads of commodities from shipper to a single consignee, will not likely apply to fertilizer. However, it was regarded as a "foot in the door" which might lead to better rates in future.

Food and Drug Administration used its five-man advisory board to establish a tolerance of one part per million on U.S. Rubber's Naugatuck Division pesticide, Aramite. This was the first time the committee had been called into play. . . . The American Potash Institute, Washington, D.C., observed its 20th anniversary. It was launched in 1935.

Agricultural losses suffered during the August floods in Connecticut, Pennsylvania and New Jersey totalled \$5 million, it was announced. Crop damage was the largest single item, being figured at \$2.8 million.

New appointees to industry positions included John E. Fletcher, L. Ralph Boynton who were promoted to new sales posts by U.S. Potash Co.; Robert J. Engelhardt, who was named vice president for J. C. Carter Corp.; John W. Crowther, promoted by Frontier Chemical Co.; and Laura S. Rockefeller was named to the board of Olin Mathieson Chemical Co.

The Federal Food and Drug Administration increased fees for the setting of tolerances for pesticidal chemicals, stating that the former charges did pay their way. In some categories, the fees were doubled. . . . Staunton Chemical Co. announced plans to merge with Consolidated Chemical Industries, Inc.

An Indian fertilizer firm, Fertilizers & Chemicals, Ltd., Travancore, India, called for tenders for the supply of manufacturing equipment. Cost of the proposed new plant is \$6 million. . . . California Spray Chemical Corp., Richmond, Cal., announced that it will build a \$1.5 million captan plant in France. Production is scheduled for the fall of 1956.

The Corn Belt Agricultural Ammonia Conference, held at Urbana, Ill., was told that full fertilization could add a billion bushels to midwest corn production. Some 700 persons registered for the meeting.

The Interstate Commerce Commission, in granting train load rates on bulk commodities when shipped by a single shipper to a single consignee, raised speculation in the fertilizer trade as to whether this principle might be applied to the plant food shipments.

Dr. G. L. Bridger, formerly of Iowa State College, has joined the Davis Chemical Division of W. R. Grace & Co. as director of agricultural research. . . . Kenneth A. Keith was named to a new position by Spencer Chemical Co. Formerly connected with the sales department and a market analyst, Keith was made manager of agricultural chemicals market research.

Southern Nitrogen Co., Inc., a newly organized firm, announced it would build a \$14 million nitrogen plant at Savannah, Ga. Officers of the company include Malcolm Smith, chairman of the board, John R. Riley, president, and George V. Taylor, vice president.

Western States Chemical Corp. will begin manufacture of complete pelleted fertilizers in a new plant now under construction at Nichols, Cal. The company has been organized as a subsidiary jointly owned by Pacific Guano Co., Berkeley, Cal., Triangle Company of Central California, Salinas, Cal., and Wilbur-Ellis Co., San Francisco.

Monsanto Chemical Co., St. Louis, announced a special sales staff within its Organic Chemicals Division to market farm chemicals which the company will market for the first time under its own label in 15 Midwest states. Charles P. Zorsch, associate manager of the division's Agricultural Chemicals Dept., heads up the new farm chemicals section within his department.

National Agricultural Chemicals Assn. registrants for the group's meeting at Spring Lake, N.J., were told that more industry statistics and market forecasts are needed. W. W. Allen, reelected president of the association, said that well may take 100% more chemicals to produce the 40% more food that the U.S. will require to feed its expanding population in the next 20 years.

A formal safety educational program for customers of the pesticide industry was proposed at the National Agricultural Chemicals Assn. meeting at Spring Lake, N.J. . . . Government researchers, through their constant tests, can prove the effectiveness of agricultural chemicals, thereby creating new demands and stimulating production, NAC registrants were told.

Don Paarlberg, USDA economist, took initiative to refute talk about "farm depression." In a speech made in New England, he brought out facts and figures indicating that farmers are not slipping in net income.

Flood damage in the northeastern states was calculated in billions. Hurricane "Diane" brought winds and rains that ruined crops, killed livestock and devastated whole areas of New England. Flood insurance was reported to be practically non-existent, thus adding to the difficulties of both farmers and businessmen. . . . A European chafer quarantine was applied to include parts of Connecticut, New York and West Virginia. . . . Grace Chemical Co. named John B. Pitner as head of its Agricultural Service Dept.

According to a report by the U.S. Bureau of Mines, the phosphate industry faces a good future in both demand and output potentials. A continuing rise in use has been noted for many years. . . . The American Society of Agronomy met at Davis, Calif., Aug. 15-19 and heard many papers on crop and soils research. New president elected was Dr. Iver Johnson, Iowa State College.



John F. Shoults, agronomist at Virginia Tech, says fall is generally preferred.

There are many reasons for continuing a good pasture. One reason is that livestock feed costs are high. The same amount of good alfalfa can be produced for \$3.00, and a ton of hay, about \$4.00.

A system of fall grazing for at least 240 days will cut the cost of hay by about one fourth. Good pasture is essential for raising livestock. Many acres of land now in pasture are not needed for crops because of wet weather. Moreover, the land now in pasture is being improved through better management and support 50 to 60 percent.

Fall treatment of soil helps in many soil organizations. Fenne, plantain, and Polytechnic. Many farmers are overlooking the fall fumigation of soil. Serious difficulties in the fall treatment of soil have been reported. Because of the fall treatment, the soil is in the process of going to work.

Treating soil in the fall is usually done in the spring. University of Kentucky Experiment Station reports, experience in the spring and fall is being used. A square yard of soil was the result. Not including cyanamide, which is used in the fall and spring use, were slightly more seeds treated.

The report, however, that the gain is out of treating corn for the better treatment.

Furthermore, of sufficient quantity to allow the growth of one of the weeds was as much as in the Calcium chloride more effective pound rate.

Legume-soybean gain for agronomy, State University Service.



FARM SERVICE DATA

Extension Station Reports

John F. Shoulders, associate agronomist at Virginia Polytechnic Institute, says fall pasture seedings are generally preferred in the state.

There are many good reasons for continuing a good pasture program, states. One hundred pounds of livestock feed from good permanent pasture costs only about 50 to 60¢. The same amount of livestock feed from good alfalfa hay costs \$2.50 to \$3.00, and from a mixed dairy ration, about \$5.

A system of pastures that provides at least 240 days of continuous grazing will cut milk-producing costs about one fourth. Based on \$75 a cow for dairy feed, pastures will be worth 60 to 75¢ a cow per day.

Good pastures also will reduce feed cost in raising pullets about 10%.

Many acres of land in Virginia, not needed for nor adapted to row crops because they are too steep or too wet, will grow good pastures. Moreover, the 4½ to 5 million acres of land now in pastures can be improved through proper fertilization and management so that they will support 50 to 75% more livestock, Mr. Shoulders says.

★

Fall treatment of tobacco plant beds to help in control of weeds and many soil organisms is advised by S. B. Fenne, plant pathologist at Virginia Polytechnic Institute.

Many farmers, he said, have been overlooking the recommendation for fall fumigation, then running into serious difficulties because of bad weather in January and February. Fall treatment is advised because farmers have a wide choice of dates, and because, with little or no vegetation in the plant bed, the fumigant can go to work with maximum effect.

★

Treating tobacco plant beds in the fall is usually more successful than in the spring, according to the University of Kentucky Agricultural Experiment Station. For the past two years, experiments were conducted in spring and fall, various treatments being used. The weed count per square yard on treated and untreated plots was the basis of comparison.

Not including the treatments with cyanamide, which was applied only in the fall as it is not suitable for spring use, the spring treatments were slightly more effective in killing weed seeds than were the fall treatments.

The report goes on to state, however, that the slight percentage of gain is outweighed by the better treating conditions in the fall, and the better control of wildfire by fall treatment.

Furthermore, the difficulty is avoided of sufficiently early spring application to allow treatment materials to leave the ground in time for seeding. In one of the two years, methyl bromide was as effective in fall treatment as in the spring.

Calcium cyanamide was considerably more effective when used at the pound rate than at lower rates.

★

Legume-seed inoculants are a big bargain for farmers, says R. A. Wasson, agronomist with the Louisiana State University Agricultural Extension Service. Yet, judging from the

number of commercial cultures sold, only about 20% of the 75 million acres of legume crops planted each year in the U.S. are inoculated, he says.

"It costs about 50¢ to inoculate enough alfalfa or clover seed to plant 3 to 5 acres of land," Mr. Wasson points out, "or about 25¢ per acre for winter peas or vetch. Commercial seed inoculants that can be purchased at these prices contain beneficial live bacteria, which are effective both for increasing yields and for improving the quality of legume crops."

ENTOMOLOGIST RESIGNS

STATE COLLEGE, N.M. — Dr. Robert E. Fye, assistant entomologist with the Agricultural Experiment Station of New Mexico A&M College for the past year, has resigned his position, Dr. R. A. Nichols has announced. Dr. Fye has accepted a position as entomologist with the U.S. Department of Agriculture and will be stationed at Florence, S.C.

WHAT'S NEW

(Continued from page 13)

spring work load, avoids the "wet spring" problem and maintains active humus in the soil. The folder urges the customer to make up his nitrogen deficiency "with 45% nitrogen Vitrea." Included is a table showing the pounds of nitrogen needed for different kinds of crop residues. The folder is available without charge. Check No. 6308 on the coupon and mail it to Croplife to receive it.

No. 6307—Couplers

James-Pond-Clark announces its new line of couplers for nitrogen solutions service designed for "rapid handling of nitrogen solutions safely and economically." The firm's "Circle Seal" couplers are claimed to provide high speed filling of tanks from top to bottom. Solutions can be transferred and maintained under pressure and loss of ammonia vapor is prevented, it is claimed. The coupler arrangement consists of a filler valve that is threaded into the tank and a coupler for quick connection between the hose and the filler valve. The filler valve incorporates a check valve unit to permit flow into the tank and automatically shuts off when the coupler is disconnected. Secure more complete details by checking No. 6307

on the coupon and mailing it to Croplife.

No. 6309—Display

Donco, Inc., has designed a 3-way, point-of-sale display featuring its liquid rat and mouse bait and liquid bait dispensers. Dealers may use the tray, containing bait packages, and the display card together or use the card and tray separately. The card has an easel for setting up on counters and in windows. Secure more complete details by checking No. 6309 on the coupon.

Soil Fumigation Doubles Tobacco Yield

DORCHESTER, S.C.—Soil fumigations for control of nematodes on tobacco gave striking comparisons this year, according to J. L. King, county farm agent here.

A check plot not treated at the Pinkney Knight farm showed roots badly infested with root rot, while the treated portion was free of nematodes, Mr. King reports. Yield on the treated portion was more than double that on the untreated portion.

HEADS SUPERVISORS

QUINCY, FLA.—David W. Maxwell, Lake City, Fla., has been elected president of the Florida Association of Soil Conservation Supervisors.

Books on Pesticides

WEEDS—Second Edition (1955)

W. C. Muenscher

Entire book has been revised and reset, with descriptions of seventy weeds added to the original list of five hundred, plus twelve new full-page plates depicting nineteen kinds. Keys and full descriptions provided for identification with detailed illustrations of 331. Types and sources of weeds, their means of reproduction and dissemination, and the amount of damage they inflict on crops. Specific directions for control, with reference to chemical methods of recent discovery \$10.00

CHEMICAL BUSINESS HANDBOOK

Dr. John H. Perry

1,300 double column pages, the equivalent of several average books; 700 illustrations, by 124 contributors. Market research data section is 280 pages, business mathematics 200 pages, financial and accounting 142 pages, research and development 150 pages, sales and advertising 92 pages, twenty sections in all. The book deals with chemical management problems and is useful to technical men, engineers and executives, in the chemical and allied fields. Dr. Perry is editor of the Chemical Engineers Handbook, a companion publication \$17.00

DDT and NEWER PERSISTENT INSECTICIDES

T. F. West and G. A. Campbell

The first and major part of book is devoted to the physical and chemical properties, manufacture, formulation and applications of DDT. The second part deals with other chlorinated hydrocarbons whose insecticidal properties have been discovered recently and compares these new insecticides with DDT. The preparation of aqueous suspensions, solutions, emulsions, and dusts containing DDT, the compatibility of DDT with other insecticides, fungicides and additions are covered in detail. Contains dozens of tables on the solubility of DDT in various solvents, the catalytic activity of accessory substances in the presence of DDT, analogues of DDT, the comparative toxicity, hydrolysis and solubility of DDT analogues, the toxicity of DDT for almost all important insects, etc. Many illustrations \$8.50

APPLIED ENTOMOLOGY, Fifth Edition

H. T. Fernald and Harold H. Shepard

This text since 1921 has had an outstanding record of usefulness. The Fifth Edition preserves the general organization and coverage, with changes to improve the presentation and to incorporate new knowledge. Contains chapters on anatomy, physiology and development. The economic importance and control of insects are discussed in a general way with much attention to insecticides. The classification of insects is emphasized, with examples drawn from species conspicuous for being very harmful or decidedly beneficial. Specific control measure included for injurious forms. Last chapter considers other pest animals closely related to insects. 385 pages \$7.00

THE CHEMISTRY AND ACTION OF INSECTICIDES

Harold H. Shepard, Entomologist, U. S. Department of Agriculture, formerly Associate Professor of Insect Toxicology, Cornell University.

Treats the chemistry of insecticides, the history of their use, their commercial importance here and abroad, the nature of the major uses, the influence of environment on effectiveness. Materials are arranged according to their chemical relationships. Two chapters relating to organic compounds largely new as insecticides. Illustrative data in form of tables, and a convenient appendix of equivalents arranged for practical use in the field. 504 pages \$7.00

WEED CONTROL

W. W. Robbins, A. S. Crafts, and R. N. Raynor

A textbook-manual presenting a modern view of the rapidly developing field of chemical weed control. Reports in detail the research on which most modern herbicide usage is based. Weeds, their reproduction, prevention, biological control, chemicals in weed control. Herbicides, foliage contact applications, hormone-like substances, root applications, evaluations of combinations of chemical applications. Weeds of grasslands and turf. Special weed problems, cropped and uncropped areas. Published 1952. 503 pages, 155 illustrations \$8.00

INSECT, FUNGUS AND WEED CONTROL

Dr. E. R. de Ong

The information is grouped according to field of application rather than to chemical composition or nomenclature. Chapters on insecticide label, seed disinfectants, herbicides, forest insects and diseases, livestock insects, and the pests found in household and industry. Fumigation of warehouses, residual sprays and preservatives for fruits, vegetables, and wood products are covered. An up-to-date guide on pest control with the needs of operators, agricultural and structural specialists carefully considered. Shippers and warehouse personnel will find the book useful \$10.00

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More than 11,000 DEALERS, 1,700 custom operators and 1,000 farm advisers receive the issue of Croplife specifically edited for their regional crop-area once each four weeks. The mailing schedule for this group covers consecutively four geographic regions of the United States (see map) with one of four regional dealer issues: The Northeast Dealer Issue, the South Dealer Issue, the Midwest Dealer Issue or the West Dealer Issue. Each week Croplife goes to more than 3,500 dealers, distributors and farm advisers in one of these four regional crop-areas.

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In addition to its national coverage, Croplife offers a selective regional circulation plan in these crop-areas

tion developed along crop-area lines offers advertisers the *most flexible medium possible*, designed to give "direct-hit" coverage for specific messages without the higher cost of a larger-than-necessary circulation on an inflexible nationwide basis. Advertisers interested in reaching dealers in more than one region can do so easily and economically with a selective advertising schedule.

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plan, bringing the total number of dealers, distributors and farm advisers receiving Croplife to more than 18,000. Each week Croplife will go to more than 4,500 of these interested readers in one of the four regional crop-areas.

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NEW ENGLAND CONFERENCE

(Continued from page 1)

ing schools, too, are giving the agricultural schools some pretty stiff competition for high school gradu-

We want you men to realize that the problem of declining enrollment in the agricultural schools affects the industry vitally," he concluded. W. R. Allstetter, vice president of the National Plant Food Institute, expressed the gratitude of his organization for the cooperation it receives from the experiment station college people and reminded them that NFFI will continue to rely on their institutions "for men and

E. Cunningham, assistant agronomist, University of Maine, in a report, "Quality of Potatoes as Influenced by Fertilization," said that growers were showing an increasing preference for washed potatoes and that washing exposes more blemishes on the surface defects. He said that the use of fertilizers affects potato quality in two ways: size and dry matter or total solids content. The total solids content is a critical factor in determining the cooking quality of the potatoes, he said, and it is affected most by the potassium fraction of fertilizers. Potassium, he pointed out, is essential for carbohydrate production but an excess has a depressing effect on the dry matter content.

Dr. Arthur Hawkins, professor of agronomy, University of Connecticut, presented a technical report on plant sources, rate of application and placement. His report was based on research projects currently being conducted at the University of Connecticut and with cooperating farmers.

Winston A. Way, extension agronomist for the University of Vermont, presented a progress report on the Green Pastures Program in the New England States. He reported that 75% of the farmers in Vermont had taken part in pasture renovation programs and that "farmers in my state are becoming educated to the use of commercial fertilizer for pasture maintenance and improvement."

He said that other benefits of the Green Pastures Program in the New England States included introduction of new pasture crops, better varieties of corn, spraying for weed control, aerial spraying for insect control on forage crops and proper maintenance of soil fertility.

The Green Pastures Program is a balanced program, Mr. Way said, and starts with the soil. "Lime is the key," he said, adding that the fertilizer manufacturers and dealers could cooperate with the lime producers in advocating the use of more lime. He said that in many instances the farmer who uses commercial fertilizer and does not get the results anticipated, is likely to blame the quality of the fertilizer when the fault really was the lack of lime.

Mr. Way told the fertilizer people that a survey of approximately 10,000 dairy farmers in Vermont revealed that 78% of the farmers fertilize cropland but only 31% use commercial fertilizer on pasture land.

Dr. H. J. Murphy, assistant agronomist, University of Maine, in an address, "Prescription Fertilization," said that this form of fertilization is limited application, and is best used on processing crops. He said that any "prescription" fertilization program must include the use of lime to bring the soil pH to 6.0 and concluded that the process was in the developmental stage and that progress must of necessity, be slow.

John Baxter, president of H. C. Baxter & Bros., Brunswick, Maine, a canning firm, gave a report on the trends in the canning industry as they apply to Maine canneries. He said that growing peas on small acreages is not economical because

of the fact that the weight of the peas is only 6% of the total weight of vines and pods, that must be transported to a central shipping plant.

He said that sweet corn is the mainstay in the Maine canning industry but that there had been a 30% decline in output during the past 30 years. This, he pointed out, was due to the competition of producers in Minnesota and Wisconsin, states which have larger available acreages and a longer growing season.

Dr. Eliot C. Roberts, assistant professor of agronomy, University of Massachusetts, in his address, "Recent Trends in Fertilizers," said that a considerable amount of research is currently in progress on the use of liquid materials, foliar feeding, high analysis fertilizers, etc. The bulk

of his report dealt with studies on liquid fertilization of golf course turf.

A report of the 1956 agricultural conservation program in Vermont was presented as the final paper on the program by A. F. Heald, state administrative officer of the Vermont Agricultural Stabilization and Conservation Office.

S. R. White, district sales manager for the Spencer Chemical Co., Chicago, was the principal banquet speaker. His topic was "Tips on Selling More Fertilizer," and he gave his listeners many worthwhile suggestions planted in a better-than-average after dinner speech. Mr. Spencer pointed out that a fertilizer dealer's obligation to his customers does not end with the delivery of the fertilizer, but that the dealer should show a sincere interest in the results a farmer obtains. His theme was to the effect that there is romance in selling fertilizer and that a good salesman recognizes that fact.

CROPLIFE, October 10, 1955—17

Dr. Roland Struchtemeyer, head of the department of agronomy, University of Maine, presided at the concluding dinner.

James Totman, president, Summers Fertilizer Co., Baltimore, presented an engraved wrist watch to P. J. Sullivan, manager, Aroostook Federation of Farmers, on behalf of the commercial fertilizer industry as a memento of Mr. Sullivan's 52 years of outstanding work for his farmer members and as a token of the industry's appreciation for the cooperation Mr. Sullivan had given the industry.

HERBICIDE PUBLICATION

BERKELEY, CAL.—A new study on weed killers has been published in pamphlet form by the division of Agricultural Publications of the University of California. The pamphlet is known as "General-Contact Weed Killers," circular 447, and was prepared by Alden S. Crafts.

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James W. Young



James P. Flavin

PITTSBURGH COKE APPOINTMENTS—Two appointments were announced last week by Pittsburgh Coke & Chemical Co. James W. Young was named as assistant supervisor in the agricultural chemicals section of the firm's Neville Island, Pa., research department. Mr. Young, a 1948 graduate of the University of Arizona with a major study of chemistry, joined the company's research and development department in 1948. Also announced was the appointment of James P. Flavin to the staff of the research and development department of the firm. He will be in charge of the experimental greenhouse facilities operated by the agricultural chemical division. Mr. Flavin is a graduate of Clemson A&M College and in 1955 received his master's degree from the University of Florida in the fields of agronomy, plant physiology and horticulture.

Union Bag & Paper To Continue Fertilizer Industry Program

NEW YORK—Union Bag & Paper Corp. has announced that it will continue during 1956 its publicity program in behalf of the fertilizer industry.

The program, which consists of news stories released through 2,500 weekly farm newspapers throughout the country, drives home the theme that "more fertilizer means bigger farm profits on less acreage."

Sydney K. Bradley, Union's vice president in charge of multiwall bag sales, reports that five stories have been released to date. They stress the part good fertilizer practices play in successful farm management.

The enthusiasm of individual fertilizer manufacturers contributed greatly to the success of the program, Mr. Bradley said.

"Our efforts to supplement the consumer promotions of individual fertilizer manufacturers have been warmly received by the industry," he said. "Our file of congratulatory let-



Sydney K. Bradley

ters attests to this fact. We're also very happy to report that certain fertilizer manufacturers have asked us to make up quantity reprints of each story for use by their own salesmen."

FERTILIZER
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CROP GROUP TO MEET

DEVILS LAKE, N.D.—The fourth annual North Dakota Crop Improvement Assn. conference will be held here Nov. 21-22.

NATURE and PREVENTION of PLANT DISEASES

By K. STARR CHESTER, Ph.D.—Stresses the practical aspects of plant disease control. Presents the essential features of plant pathology as exemplified in the leading diseases of important American crops. Extensive revisions of seed treatment, and spraying and dusting of fruits and vegetables are included. The latest developments in control practices, including the slurry, pelleting and vapor-heat methods of seed treatment, new non-metallic organic fungicides, innovations in methods of spraying and dusting are discussed.

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4th Edition, by GILBEART H. COLLINGS, Ph.D.—Based upon the author's practical experience as an experiment station agronomist and teacher. Incorporates information on recent developments by agronomists, chemists, engineers and fertilizer manufacturers. An authoritative source on all problems concerning commercial fertilizers and their use in gaining larger yields of field and horticultural crops.

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WORLD REPORT

By GEORGE E. SWARBRECK
Croplife Canadian and Overseas Editor

The market for agricultural chemicals in Argentina is an expanding one. Officials of the U.S. Department of Commerce, who have examined the potential, describe the industry as promising though largely undeveloped.

The aim is self-sufficiency. Right now the troubled political situation is snarling progress, but as soon as a more settled state is reached there appears to be little standing in the way of advancement. Plans have been made for the manufacture of urea, ammonium sulfate and nitrate, and herbicides.

Superphosphate is the only chemical fertilizer produced in Argentina at the present time. The output of the two firms engaged was around 6,000 tons in 1954. They could have produced 10,000 tons, but the high price of sulfuric acid so increased their costs that it was uneconomic to produce more. The market would not stand for it.

Some compounding of fertilizers is done using imported materials, but the production is no more than 40,000 tons a year. Smaller firms make a variety of mixtures but their potential is limited by the lack of foreign exchange to import the necessary ingredients.

In the insecticide field benzene hexachloride leads the way, with an estimated output by three firms of 3,600 tons. Some lindane is produced also. Several companies make sulfur sprays but the larger agricultural producers prefer to make their own formulations. Three petroleum firms make oil sprays widely used for insect control. The two chief producers of nicotine sulfate made approximately 50 tons in 1954.

Two companies are producing Paris green, but this product is gradually being replaced by BHC formulations. Towards the end of last year a DDT plant was completed and the 1955 output is expected to be in the region of 500 tons.

Canadian Acid

Canadian sulfuric acid productive capacity continues to grow. Inland Chemicals, (Canada) Ltd., announces that its new \$1 million plant at Fort Saskatchewan in Alberta is now operating. Output is 100 tons a day. It was constructed by the Lummus Co. of Canada and is located near the nickel ore processing plant of Sherritt-Gordon Mines and will use as feedstock pure sulfur produced by the Shell Co. of Canada at Jumping Pound, Alta.

Nichols Chemical Co., Ltd. has announced a plan to increase the capacity of its works at Valleyfield, Que. This is expected to increase sulfuric acid output by 60% and will make this location the largest sulfuric acid producing area in Canada, the company states. Completion of the additional facilities is expected by February, 1956.

Israel Exports

The value of fertilizers and fertilizer by-products to be exported by Israel this year should reach a value of \$2½ million, according to Fertilizers and Chemicals, Ltd., Haifa, the largest firm engaged in the business.

Shipments have been made to Europe, the Far East and South America. Export availability will be stepped-up shortly because ammonium phosphate and potassium sulfate, from recently constructed plants, is now coming into production.

Mite Pesticide

Dutch research men claim to have perfected a new pesticide for the control of mites which is safe for the sprayer and for the consumer of

treated vegetables. The new pesticide does not harm beneficial insects, it said.

Reporting on their development O. Huisman, R. van der Veen and Meltzer say that the chemical, Tetra V 18 or 2,4,5,4'-tetra-chlorodiphenyl sulfone, killed all the eggs and larvae of several harmful mites, though adult mites were unaffected.

South African Problem

Bacterial blight is seriously infecting vineyards in South Africa and the Western Province Fruit Research Station at Stellenbosch has been conducting some research to effect a cure.

A report says that the absence of the leaf phase of the disease in vines treated with copper and Captan, as compared with those in the severely infected control plots, suggests that the gradual elimination of secondary shoot infection from old infected vineyard may become possible.

The more recent findings in connection with the control of bacterial diseases in fruit trees and other crops have shown that spraying with antibiotics during the growing season appears to be yielding results.

During the past season experiments have been carried out in order to see what effects the use of streptomycin and terramycin may have on the spread of bacterial blight organisms from the cankerous lesions to new growth.

American experience has been drawn upon and with this in mind some spray trials have been carried out. However, preliminary indications are that antibiotics are not applicable to the control of bacterial blight, because they appear to have a phytotoxic effect on the crop.

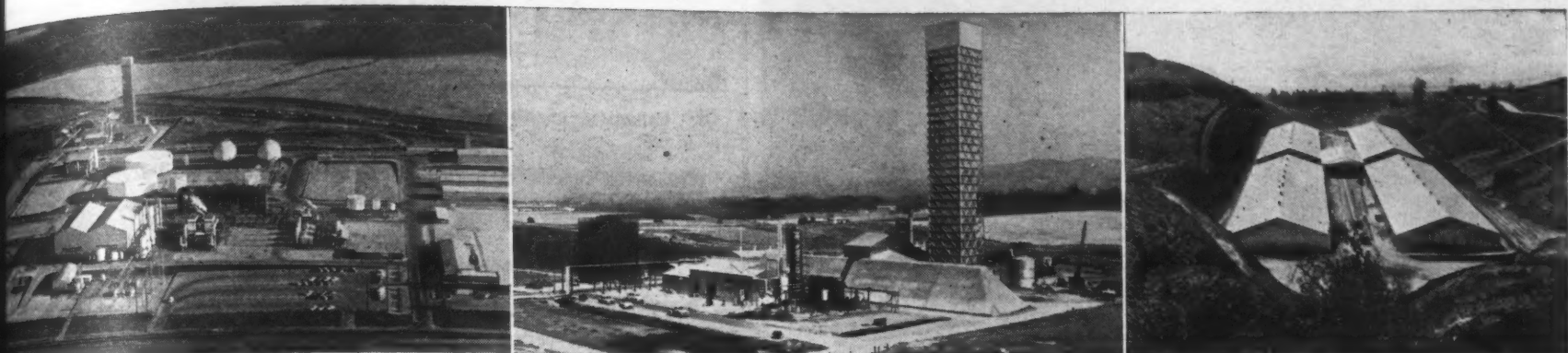
U.K. National Crop Protection Conference Set for Oct. 31-Nov. 3

LONDON — Representatives of British spray contracting firms will take part in the U.K. National Crop Protection Conference to be held at Eastbourne Oct. 31-Nov. 3.

Scheduled to be presented at the conference are 26 papers dealing with pest control problems of agriculture, application, glasshouse cultivation and horticulture. Seed dressings will be discussed also.

R. E. Longmate, E. C. Longmate Ltd., Wisbech, a firm prominent in British spraying business, will take the chair for the first half of the session to be devoted to spray problems. Two papers will be presented, one dealing with "the application of materials to control pests and diseases of pea crops" and the other examining the differences between high and low volume spraying.

Other papers will deal with application aspects of Aphid control in sugar beet, brassicas and related crops and the session will conclude with a discussion on application methods with particular reference to organic phosphorous compounds, and a paper on "The Residues Problem."



BREA PLANT—Three views of the new ammonium nitrate plant and warehouses of Brea Chemicals, Inc., near Brea, Cal., are shown above. At the left is an airview of the plant, on a 50-acre site which was open farmland 10 years ago. Center is a view of the 200-ft. prilling tower, which, according to Brea officials, is the tallest all-aluminum process structure in the world.

Right are the new warehouses, designed to store a quarter of a million 80-lb. bags of ammonium nitrate fertilizer prills. Each of the warehouses can be loaded to an average height of 12 ft. They have a combined capacity of 20,000,000 lb. The plant is the first in the West to produce ammonium nitrate fertilizer prills.

First Carload of Ammonium Nitrate Prills Shipped From New Brea Chemicals Plant

LOS ANGELES—The first carload of "prilled" ammonium nitrate fertilizer was shipped from the new plant of Brea Chemicals, Inc., subsidiary of Union Oil Company of California, recently, according to Homer Reed, Brea president. The Brea plant will produce 50,000 tons per year of ammonium nitrate, the second largest tonnage dry sim-fertilizer used in the West. Brea ammonium nitrate is manu-

factured in the form of prills, small round beads formed like buckshot by spraying hot liquid ammonium nitrate into the top of a 200 ft. tower.

The drops take more than 10 seconds to fall through a controlled up-draft of air, solidifying into balls as they are cooled and dried before hitting the bottom. The prills are screened for uniform size, coated with diatomaceous earth for free flowing properties, and bagged.

The Brea prilling tower, 200 ft. high and 30 ft. square, is the tallest all-aluminum process structure in the world, according to Brea. The frame, the walls, all the piping, fittings and connections—even the nuts and bolts—are solid aluminum.

The ammonium nitrate plant utilizes part of the output of the adjacent Brea ammonia plant completed a year ago. In addition to the dry ammonium nitrate fertilizer prills, Brea will market nitric acid.

Additional facilities will be com-



Homer Reed

pleted early next year for production of ammonium nitrate solutions of 20 and 40% net nitrogen content.

Brea has constructed four steel and aluminum warehouses in the hills near the plant which have a combined capacity of 20,000,000 lb., or a quarter million 80 lb. bags.

Each warehouse is 320 ft. long and

80 ft. wide, equipped with the latest automatic zoned sprinkler system. Covered docks permit wet-weather truck loading.

The new plant, costing more than \$2 million, was engineered by Chemical and Industrial Corp., Cincinnati, and was constructed by Macco Corp., Paramount, Cal.

Oats Gains in Favor As Texas Forage Crop

COLLEGE STATION, TEXAS—The total estimated acreage of small grains planted in Texas in 1955 for forage alone exceeded one million acres and oats made up 844,050 acres of the total. Dr. I. M. Atkins, agronomist in charge of small grains for the Texas Agricultural Experiment Station, says the figures on small grain plantings for forage purposes were obtained in a survey made through the county agents of Texas.

The survey showed that a total of 3,393,555 acres of oats were grown in 1955 which Dr. Atkins points out is more than twice the 1943-52 average of 1,229,000 acres. He says the cut in wheat and cotton acreages and the introduction of new varieties through the station's small grain breeding programs have been factors in the increase. Several of the newer varieties have been bred for forage production.

LESS WHEAT ACREAGE

RICHMOND, VA.—Since 1910 Virginia's wheat acreage has declined more than 50%, but production has dropped only about 25%, according to the State Department of Agriculture and Immigration.

Former Designs Ground Machine for Boll Weevil Poisoning

CARAWAY, ARK.—Paul Downs, a farmer in the vicinity of Caraway, Ark., faced with fighting boll weevils in his cotton for the first time, has designed a ground machine for poisoning. The machine, a super-sprayer, can be used not only for poisoning but also for defoliation. In August the machine was but a dream. In less than five weeks it was completed and ready to put in use. The machine has been used to poison about 3,000 acres against boll weevils and to defoliate about 600 acres.

The machine grew out of Mr. Downs' recollection of a corn spraying machine built by a friend, Owen Hilvety, a small manufacturer in Quimby, Iowa. The Hilvety machine was not adaptable for cotton spraying, so with Mr. Downs' design and Mr. Hilvety's mechanical know-how, the super-sprayer was born.

The machine is self-propelled with a 6-horsepower air cooled motor. It has one wheel in front and two behind, and carries a 165-gal. stainless steel tank. There are three forward gears which enable it to travel at speeds of four, six and 12 miles per hour. It looks somewhat like a rounded airplane.

The booms for spraying reach out to 13 and a half 38 inch rows. The machine moves down to cotton mid-row without damage to the plant because it can spray from ground level to 7½ feet in the air. The machine operates on five gallons of gas a day and is easily towed on the road without whipping or zig-zagging. A spokesman for Mr. Downs said the machine will be put on the market for sale in the near future. Where the assembly plant will be located has not been decided.

ASSISTANT DIRECTOR NAMED
GAINESVILLE, FLA.—Dr. John Stites, former horticulturist at the Citrus Experiment Station, Lake Wales, Fla., assumed his new duties as assistant director and horticulturist at the University of Florida Agricultural Experiment Stations in Gainesville.

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. . . Selling

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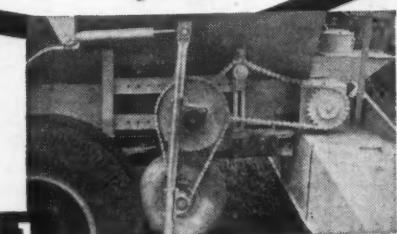
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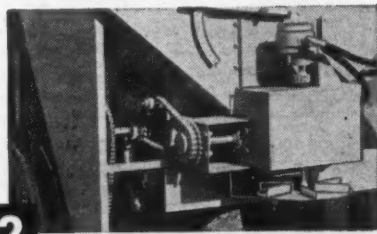
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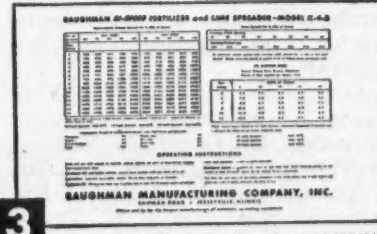
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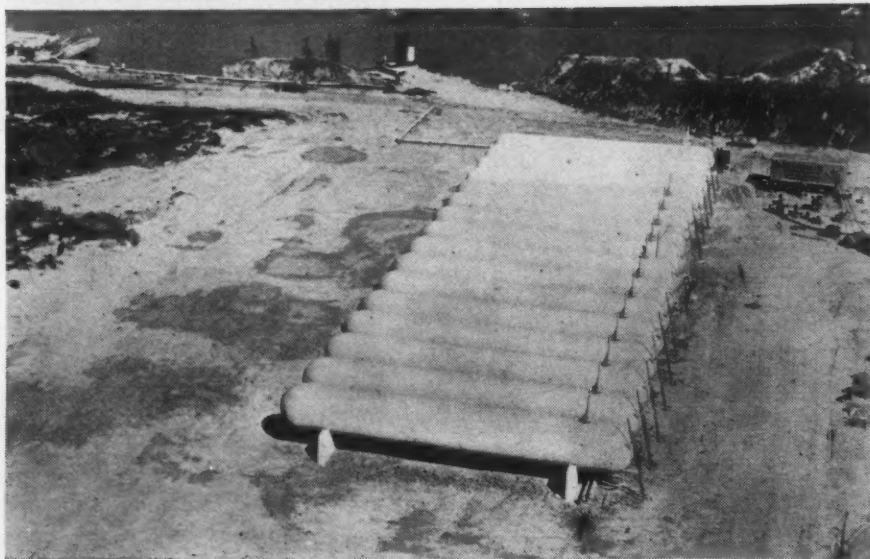
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MID-SOUTH TERMINAL—A specially-built barge, far left, unloads the first shipment of anhydrous ammonia to be received at the new Harlingen, Texas, terminal of Mid-South Chemical Corp. Pipelines lead up the bank to the sixteen 30,000 gal. tanks, from which the ammonia is distributed to smaller stations throughout the Lower Rio Grande Valley by tank car and highway transport. The terminal, one of the largest high-pressure ammonia storage terminals in the nation, was built by Edward S. Nelson, Ltd., of Clarksdale, Miss.

Mid-South Chemical Corp. Places New Ammonia Terminal Into Operation

MEMPHIS — Mid-South Chemical Corp. has placed in operation one of the largest high-pressure ammonia storage terminals in the U.S. at the port of Harlingen, Texas.

The terminal includes a battery of sixteen 30,000 gal. tanks with unloading facilities for barges operating on the Intracoastal Waterway. Ellis T. Woolfolk, president of Mid-South, said it will be the distribution center for a network of smaller distributing stations the company plans immediately in the Lower Rio Grande Valley.

The terminal also has rail and truck loading facilities for moving the nitrogen fertilizer to other bulk plants and farms.

Specially built barges, each with a capacity in excess of 400,000 gal., are used to transport the ammonia to the terminal. The first barge to reach the terminal unloaded a capacity cargo Sept. 17 in about seven hours.

Mid-South's new terminal, situated in the Arroyo Colorado Navigation District, was built under contract by Edward S. Nelson Ltd. of Clarksdale, Miss.

The Harlingen facilities mark the second in a series of waterway terminals being built by Mid-South, the first being put in operation in Memphis last spring. Other

Speakers Named for Crop Session of Antibiotics Conference

WASHINGTON — A session on "Crop Usage" is included in the program of the first International Conference on the Use of Antibiotics in Agriculture, to be held here Oct. 19-21.

The crop session will be held the morning of Oct. 21, with Dr. James G. Horsfall, director of the Connecticut Agricultural Experiment Station, as moderator.

Appearing on the panel will be Dr. Clyde M. Christensen, University of Minnesota; Dr. George L. McNew, Boyce Thompson Institute, and Dr. H. C. Young, Ohio Agricultural Experiment Station. Dr. J. C. Dunegan, U.S. Department of Agriculture, will do the summation.

ENTOMOLOGIST NAMED

FAYETTEVILLE, ARK. — Robert C. Hunter has been named graduate assistant in the University of Arkansas department of entomology. He will conduct research on the cotton bollworm control under a grant from Hercules Powder Co.

terminals and distribution centers are planned on the Gulf Coast and the Mississippi River in the Upper Midwest.

Source of the ammonia will be a new plant to be built at Lake Charles, La., which will receive its raw materials from the oil refineries of Cities Service Co. and Continental Oil Co. at Lake Charles. These two companies recently acquired an interest in Mid-South.

	1941		1946		1951		1954	
	Mix.	Mat.	Mix.	Mat.	Mix.	Mat.	Mix.	Mat.
NEW ENGLAND	84	16	85	15	82	18	89	11
Maine	96	4	97	3	95	5	97	3
New Hampshire	67	33	63	37	72	28	80	20
Vermont	77	23	49	51	61	39	80	20
Massachusetts	73	27	78	22	83	17	87	13
Rhode Island	80	20	84	16	86	14	91	9
Connecticut	57	43	71	29	68	32	78	22
MIDDLE ATLANTIC	71	29	81	19	83	17	90	10
New York	61	39	73	27	75	25	87	13
New Jersey	90	10	92	8	92	8	93	7
Pennsylvania	71	29	85	15	86	14	93	7
EAST NORTH CENTRAL	88	12	85	15	88	12	83	17
Ohio	90	10	93	7	95	5	94	6
Indiana	91	9	91	9	91	9	87	13
Illinois	74	26	62	38	67	33	59	41
Michigan	86	14	84	16	92	8	93	7
Wisconsin	86	14	80	20	94	6	94	6
WEST NORTH CENTRAL	49	51	50	50	67	33	62	38
Minnesota	64	36	48	52	79	21	79	21
Iowa	72	28	56	44	69	31	65	35
Missouri	51	49	54	46	78	22	72	28
North Dakota	8	92	80	20	74	26	44	56
South Dakota	5	95	37	63	47	53	39	61
Nebraska	1	99	13	87	28	72	28	72
Kansas	20	80	23	77	36	64	42	58
SOUTH ATLANTIC	75	25	81	19	82	18	84	16
Delaware	87	13	94	6	96	4	93	7
Maryland	87	13	91	9	90	10	95	5
D. C.	49	51	84	16	77	23	78	22
Virginia	77	23	74	26	85	15	90	10
West Virginia	64	36	55	45	66	34	91	9
North Carolina	80	20	86	14	83	17	83	17
South Carolina	65	35	75	25	70	30	71	29
Georgia	68	32	76	24	80	20	82	18
Florida	85	15	92	8	91	9	91	9
SOUTH CENTRAL	56	44	55	45	57	43	58	42
Kentucky	57	43	57	43	74	26	75	25
Tennessee	61	39	52	48	68	32	71	29
Alabama	60	40	64	36	69	31	73	27
Mississippi	39	61	43	57	39	61	40	60
Arkansas	54	46	51	49	52	48	45	55
Louisiana	57	43	53	47	49	51	49	51
Oklahoma	81	19	62	38	52	48	46	54
Texas	78	22	57	43	44	56	45	55
WESTERN	31	69	39	61	24	76	19	81
Montana	6	94	11	89	10	90	12	88
Idaho	1	99	12	88	16	84	6	94
Wyoming	0	100	7	93	12	88	22	78
Colorado	31	69	23	77	35	65	28	72
New Mexico	5	95	9	91	5	95	7	93
Arizona	15	85	46	54	21	79	14	86
Utah	6	94	16	84	9	91	11	89
Nevada	21	79	18	82	23	77	21	79
Washington	33	67	47	53	35	65	17	83
Oregon	60	40	39	61	23	77	18	82
California	31	69	43	57	25	75	22	78
UNITED STATES	70	30	72	28	71	29	71	29

USE OF MIXED GOODS, MATERIALS—Shifts in the pattern of use of mixed fertilizers and materials are pointed up in the chart above, prepared by the National Plant Food Institute. The chart shows the percentage of all plant food used as mixed goods and as materials by states and regions for four selected years.

1955-56 NUTRIENT SUPPLY

(Continued from page 1)

the capacity of the industry to produce.

Wholesale prices of most nitrogenous fertilizers are slightly lower than they were a year ago, but phosphate and potash prices are about the same. The wholesale price of urea dropped substantially during the past year.

The average retail price of all mixed fertilizers sold in the U.S. in the 1953-54 season, as published in the Sept. 15, 1954, issue of "Agricultural Prices," weighted by the tonnage of each grade sold, as reported by the Soil and Water Conservation Research Branch, is \$54.82 a ton.

Similar weighted averages of chemical nitrogenous materials, natural organics, phosphates and potash materials sold separately are \$88.26, \$54.12, \$40.49 and \$54.25, respectively. In the 1954-55 season retail prices of mixed fertilizers and potash materials averaged about \$1 a ton less, of nitrogenous materials about \$2 a ton less, and of phosphates, no change.

Although every synthetic ammonia plant in the U.S. was operating at near capacity in 1951, with the exception of Morgantown Ordnance Works, demand for nitrogen was met only because of decreased exports and increased imports. The import-export balance suddenly changed from 1950 to 1951. This trend continued until 1953, but has now swung in the other direction. In 1952 about 95% of total capacity was fully utilized to produce nitrogenous materials. In the 1954-55 fiscal year the rate of production had dropped to about 82% of capacity.

If demand for nitrogen should continue to grow at the rate it has in recent years, agriculture would require about 3 million tons in 1959-60.

It appears now that agricultural consumption in 1954-55 approximated 2 million tons of nitrogen. Such requirements continue to increase 10% per year, as they did for a number of years, ample production capacity will be available in North America by July 1, 1956, to take care of this and all other normal needs of this continent for the next years.

Because the heaviest demand for superphosphates occurs during a period prior to application, the lack of suitable storage space limits operation of producing plants the rest of the year. This situation affects the estimation of plant capacity.

However, it can be stated that production capacities have increased from Jan. 1, 1952, to Jan. 1, 1955, as follows: normal superphosphate 4%, concentrated superphosphate 187%, and miscellaneous phosphates 52%.

Miscellaneous phosphates include basic slag, ammonium phosphate, nitra-phosphates, fertilizer-grade bone meal and a number of other materials of lesser importance.

During the coming year about 2,000 tons of additional P₂O₅ capacity is expected to come into production. A considerable part of this will be in the form of ammonium phosphate.

Estimated production capacity refined salts was 1,400,000 tons K₂O on Jan. 1, 1951. Capacity July 1, 1955, was estimated to 2,100,000 tons. Plans to erect 4,000 tons of additional K₂O capacity have been announced for early completion. Facilities to produce 40,000 tons of additional potassium sulfate came into use during the past spring. Most of the large potash producers have acquired rights to mine potash in the Province of Saskatchewan, Canada. One company is sinking a shaft to the potash beds. Commercially exploitable potash beds are reported to have been found in Grand Canyon, Utah.

The use of fertilizer-insecticide mixtures in agriculture increased from 10,000 tons in 1950-51 to 87,000 in 1952-53, 149,000 in 1954 and around 200,000 tons in 1954-55.

Use of liquid fertilizers for many purposes has been handicapped by lack of an inexpensive implement that would make satisfactory application. An improved hose-pump sprayer with a distributor attachment for tractor operation other machinery has been developed for this purpose in cooperation with USDA. Commercial manufacture of this attachment began during the past year.

Cotton Foundation Bldg. Dedication Planned

MEMPHIS—Plans for ceremoniously dedicating the Oscar Johnston Cotton Foundation Bldg. in the afternoon of Oct. 19 are almost complete. A. L. Durand, Hobbs, Okla., chairman of the foundation board of trustees, in announcing plans for the dedication said that in addition to leaders of the cotton industry the attendance list will include civic and business leaders throughout the Mid-South area. Headquarters of the Cotton Foundation are at 1918 North Parkway, the building at 1918 North Parkway was occupied late in July. The structure is a tribute to Oscar Johnston who founded the council and headed it until ill health caused his retirement in 1948. In the midst of plans for the dedication Mr. Johnston died in Greenville, Miss., Oct. 3.

Canadian Pesticide Business to Merge

MONTREAL—The amalgamation of the pesticide operations of Canadian Industries (1954), Ltd. and Chipman Chemicals, Ltd., two of Canada's leading manufacturers of pesticides, will take place within the next few months, according to a statement issued by the companies.

Fifty per cent of the shares in the joint company, to be known as Chipman, Ltd., will be held by CIL and 50% by Chipman.

The head office of the new company will be in Montreal. It will have four plants located at Buckingham, Que., Hamilton, Ont., Winnipeg, Man. and Moose Jaw, Sask. Sales and technical services will be handled from offices located at suitable centers across the country. Operations of the new company will also include customizing of railroad beds and rights-of-way for destruction of weeds and brush.

The board of directors of Chipman, Ltd. will be comprised of Leon Hynes, vice president of Canadian Industries (1954), Ltd.; V. B. Hynes, general manager, and J. H. D. Ross, assistant general manager of the agricultural chemicals division, Montreal; W. H. Moyer, president, Chipman Chemical Co., Inc., Bound Brook, N.J.; J. D. Rutman, president, Chipman Chemicals, Ltd., Winnipeg; C. T. Ward, joint managing director of Plant Protection, Ltd., London.

Officers proposed for Chipman, Ltd. are: president, J. D. Rutman; treasurer, E. L. Hamilton; secretary, D. W. Shales. J. H. D. Ross will be general manager.

The amalgamation brings together organizations which have had extensive experience with pesticides in Canada. Chipman introduced chlorinated hydrocarbon weed killers, notably "Atlacide," in Canada in 1926, while CIL introduced mercurial seed dressing in 1934.

Chipman, Ltd. will have behind it the extensive research resources of Canadian Chemical Industries, Ltd., Plant Protection, Ltd., both of the United Kingdom, and of Chipman Chemical Company Inc. of the U.S.

While the pesticide business of CIL is being transferred to the new company, the CIL agricultural chemicals division will continue its other operations such as the manufacture and sale of superphosphate and compound fertilizers and the sale of fertilizer materials. Until the sales offices of Chipman, Ltd. are established in western Canada its products will continue to be handled through the CIL agricultural chemicals offices at Hamilton, Chatham, Toronto, Montreal and Halifax.

In western Canada, products of the new company will be handled from the existing offices of Chipman Chemicals, Ltd. at Winnipeg, Saskatchewan and Edmonton.

Immigration Keeps Grain Safe in Virginia

RICHMOND, VA.—W. L. James, an expert with the Department of Agriculture and Immigration of Virginia, recently tabulated his third year of study of farmers who store grain on the farm.

His reports that farmers who stored grain for three years without loss of grain fumigated their bins before and after the grain went in. They fumigated two or three times during the storage season whenever they found any evidence of weevils. Fumigation three times cost farmers an average of 2¢ bu., he reported.

Fall Rains Have Varied Effect On Mid-South Crops

MEMPHIS — Mid-South farmers took advantage of the fall rains that stopped cotton picking over most of the area to plan for the breaking of land for small grains and winter cover crops.

Extension agents in Arkansas, Mississippi, Missouri and Tennessee reported the rains had a varied effect on the soybean crop, causing some damage in Southeast Missouri, but helping in other areas.

Rice combines were back in the fields at the week's end. Small grains, cover crops and pastures were helped by the rains.

Extension agents reported the defoliation of cotton got underway last week in many areas, preparatory to using the mechanical pickers. Some farmers in Southeast Missouri report they have picked a half a bale to the acre on the first picking — indicating an excellent yield this year.

Recent rains in Arkansas are expected to bring some definite improvements to this year's soybean crop, the Agricultural Extension Service reports.

Dry weather, which hit in mid-summer, had cut down on soybean prospects but the extension service said rains had improved the outlook generally. In some areas, harvest of soybeans was underway.

Mechanical cotton pickers in Arkansas are being called on more throughout the state as this year's cotton crop matured and defoliation could be done on a larger scale. Cotton was reported as grading out well.

The Arkansas hay harvest is about over and farmers are expected to be in much better shape for this winter than for the past few years.

In West Tennessee, rains slowed picking of cotton but with good weather, farmers will return to full harvest work this week, John Bradley, assistant county agent of Jackson, reported.

"The cotton crop will be better than last year and ginners report they expect the heaviest picking to be done in late October because of the late start," Mr. Bradley said.

"Corn will be better than last year, although some damage was done by the drought. Damage to cotton by the rains will be more than overcome by the good done small grains and cover crops. The outlook for the area is excellent."

Cotton picking continued as the number one job of Mississippi farmers, the Mississippi Agricultural Extension Service reported.

Picking is estimated by cotton specialist T. M. Waller as about 45% completed. Yields are turning out better than expected, he added.

A. G. Bennett, extension entomologist, added that many farmers, especially those in boll weevil "hot spot" areas, are cutting and shredding cotton stalks as soon as a field is picked out. This destroys boll weevil hibernating places and winter food for the insect, Mr. Bennett said. Such practices will help greatly with next year's early season cotton insect control problems, he explained.

Rainfall in Southeast Missouri in the latter part of the week slowed down cotton picking and threatened damage to the area soybean crop, extension officials said.

"The bean crop is certainly not going to benefit by the rains that appear," W. F. James, Pemiscot County agent, said.

TO HEAD STATION

MANHATTAN, KANSAS — Evans E. Banbury, Sherman County agricultural agent, has been appointed superintendent of the Kansas State College branch agricultural experiment station at Colby, effective Nov. 16.



Dr. Roger Bart

W. B. Williams

F. N. Oberg

International Minerals Names 3 to Staff of Florida Station

CHICAGO — Dr. Roger Bart has been appointed manager of International Minerals & Chemical Corp.'s Research Experiment Station at Mulberry, Fla., according to an announcement by Dr. Paul D. V. Manning, vice president in charge of the corporation's Research Division.

Dr. Manning also announced the appointments of W. B. Williams as supervisor of chemical process development and F. N. Oberg as supervisor of coordinating services at the Florida experiment station.

Dr. Bart joined the staff of the experiment station as chemical engineering group leader in December, 1951. For the past two years he has been supervisor of chemical process development. He is a registered professional engineer in Florida and is a member of the American Chemical Society, the American Institute of Chemical Engineers and Tau Beta Pi, honorary engineering society. He received his doctor's degree from Massachusetts Institute of Technology. Before joining International he was an instructor at M.I.T. and a chemical engineer with the research and development divisions of the Standard

Oil Development Co. and the Du Pont Co.

Mr. Williams has been chemical engineering section leader. He joined International's Research Division staff in March, 1953. He has made major contributions to pilot plant studies of recovery from leached zone materials, startup of the corporation's Bonnie plant and design of the triple superphosphate unit at the Bonnie plant. He was formerly a member of the research department of Phillips Petroleum Co. and of the chemical engineering department of the Tennessee Valley Authority. He is an engineering graduate of Alabama Polytechnic Institute.

Mr. Oberg has been associated with the chemical engineering and ore dressing departments of International's Research Division since he joined it three and one-half years ago. In his new position he will be in charge of the analytical chemistry, maintenance and purchasing sections at the Florida experiment station and will also serve as technical assistant to the manager.

He came to International from American Cyanamid Co. and M.I.T., where he worked on uranium recovery processes. He holds a bachelor of science degree in metallurgical engineering from the South Dakota School of Mines. He has had experience in chemical metallurgy with American Smelting and Refining Co. and Tin Processing Corp.

Farm Bureau Studies Soil Fertility Bank

CHICAGO — Charles B. Shuman, president of the American Farm Bureau Federation, said here recently that his organization is studying methods of putting into a "soil fertility bank" land that has been diverted from producing crops covered by government price supports.

He told a luncheon meeting of the Farm Bureau that "it is better to stockpile fertility in the soil that to store surplus commodities in government bins." The organization has endorsed the proposal by resolution.

Willis M. Cooper In New Monsanto Post

ST. LOUIS — The appointment of Willis M. Cooper of St. Louis as an assistant general manager of the Research and Engineering Division of Monsanto Chemical Co. has been announced here by J. Russell Wilson, Monsanto vice president and general manager of the division.

In his new assignment, Mr. Cooper will be responsible for the engineering activities of the division. He has been director of the division's engineering section. The other functions of the Research and Engineering Division will continue to report to Dr. N. N. T. Samaras, assistant general manager.

MARKETING CHIEF

SACRAMENTO — W. C. Jacobsen, California director of agriculture, has announced the appointment of William J. Kuhrt as chief of the State Division of Marketing. Mr. Kuhrt fills a vacancy created by the appointment of C. J. Carey to the position of deputy director Feb. 15, 1954.

3,000 Gal. Anhydrous Ammonia Escapes As Hose Breaks

GIBSON, IOWA—About 3,000 gal. anhydrous ammonia escaped here Oct. 4 when a hose broke while the NH₃ was being transferred from a 10,000-gal. railroad tank car into local storage tanks.

The operation was being conducted by the Gibson Fertilizer Co. The anhydrous ammonia spread across the town "like a heavy fog."

The town's residents, some 100 persons, were evacuated. Subsequently, the wind cleared the atmosphere, but as late as Oct. 6 there were traces of the gas in the town.

William Caughey, Grinnell, Iowa, capped the tank after the hose broke. Aiding him were firemen who played a stream of water on the tank to clear away the gas and fumes.

A doctor recommended that the residents of the town throw away any food, except that canned or otherwise protected, that was in the houses during the period.

John D. Krebs Buys Illinois Fertilizer Firm

SPRINGFIELD, ILL. — John D. Krebs, of Krebs Ammonia Co., has purchased the tangible assets of Midwest Fertilizer Co. here and has formed a new firm, Krebs Fertilizer Co. The main office will be in Springfield, with branch bulk plants at Seneca, Perry, Jacksonville and Butler.

POTASH, BORON DEFICIENCY

LEXINGTON, KY. — Alfalfa in Caldwell County, Ky., suffered this year from drought and insufficient potash and boron in the soil, according to the University of Kentucky.

Croplife

A WEEKLY NEWSPAPER FOR THE FARM CHEMICAL INDUSTRY

The regional circulation of this issue is concentrated in the Southern states.

VIEWPOINT

Use of Chemical Tools Reduces Credit Risks

The proper use of credit by a reliable farmer based on a sound farming program has changed most banker's viewpoints with reference to agricultural loans in their portfolios. The credit rating of such farmers is now considered in most lending institutions as Grade A credit risk due to tremendous technological advances made in agriculture in the last few years.

Such individuals with proper credits available can contribute immensely to the development and prosperity of any community. The improper use of credits, likewise, in the hands of inefficient farmers can and will eventually lead to insolvency.

The credit rating of efficient farmers is now considered Grade A, an accomplishment which has brought about a complete change in the credit requirements of the farmers of today. The application of the latest scientific research, shortage of farm labor, governmental policies, and acreage control programs with all other implications included, have contributed immensely to this changing pattern.

The average capital invested per farmer today is far greater than the capital invested by the average factory worker. Not only has he more capital invested but his knowledge has to cover a wider range of subjects because of the daily necessity of making important decisions affecting his varied operations, in a highly competitive field.

Intelligent application, on the part of the farmer, of advances in agricultural research and the effects of governmental programs and policies have contributed in the last few years to reduce greatly the risk involved in the handling of production loans—short term credit. Fertilization, improved varieties, insect control, price support programs, and good soil conservation practices contribute to boost the farmers' credit rating.

Largely because of improved facilities for soil testing, available to farmers, the kind and amount of fertilizer to use per acre is no longer guesswork. The information obtained through such tests enables farmers to determine the correct and right kind of fertilizer to use on their crops on any type of land. Ordinarily, an investment bringing 6% return is considered good.

The proper use of commercial fertilizer, however, will pay much higher dividends than that. Sooner or later, farmers learn the false economy of trying to economize by cutting down the amount of fertilizer they use per acre. A credit man handling production loans is in position to exert a tremendously beneficial influence on the farmer's effort to attain maximum production, by recommending the proper kind and amount of fertilizer.

In order to obtain maximum return on funds invested in fertilizer, provision should be made in the farmer's overall program to maintain proper balance of organic matter in his land. Farmers commonly make the mistake of purchasing fertilizer based on price alone disregarding the analysis of the fertilizer and crop and soil requirements. Such practice leads only to unprofitable, disappointing results.

Experimental work to develop and test new varieties of seed is no longer an added burden on the modern farmer. Experiment stations operating under our Land Grant Colleges and private institutions do all the research in the development and testing of new varieties before they are released.

Good seeds mean good stands. Good stands mean higher yields per acre. Higher yields reduce unit cost per acre. Growers of certified seeds

should be congratulated for the job they have done in supplying farmers with greatly improved seeds.

Proper use of insecticides can mean the difference between crop success and failure. In most cases, major expense has been incurred to bring the crops up to that point and failure to use insecticides as warranted by conditions would be equivalent to failure to take out fire insurance on a mortgaged house.

Improper use of insecticides means added expense and disappointing results. Close adherence to recommended practices in the use of insecticides is necessary if desired results are to be obtained. Such recommendations, usually, are based on long years of study and research. They are precise, accurate and thoroughly dependable.

Complete crop failure due to insects and diseases is almost a thing of the past provided that the timing, rate of application, kind used, and methods applied are in accordance with accepted recommendations.

The point of equilibrium at which supply and demand meet was at one time considered to be the price which consumers are willing to pay for a farm commodity. Another factor has been added to the price picture now and that is governmental price support programs and policies. Without going into the merits or demerits of price support—high or flexible—the risk involved in the production of certain farm crops due to abrupt price changes has been practically eliminated. By estimating their yields, cost of production and minimum prices, farmers are now in position to plan their operations on a business-like basis.

Other factors which have helped to stabilize prices for farm commodities are the discovery of new uses for agricultural products; better means of transportation; better methods of merchandising on the part of the farmers, packers, and retailers; advertising campaigns; more consumers due to increasing population and fewer people on farms; orderly marketing; and the reduced manhours required to produce certain farm crops due to mechanization and other advancements.

Of all the factors that influence crop yields, farmers probably have least control over the weather. However, the effect of weather conditions can be greatly minimized if all other factors contributing to good farming are faithfully adhered to. Good sound soil conservation practices; owning the necessary farming equipment to do the job when conditions are right; and close attention to weather forecasts help to minimize the influence of weather conditions. Too many times weather is blamed for difficulties which in some measure, at least, were due to failure to follow recommended practices.

Other factors which contribute to reducing risk in the production of crops are good seed bed preparation and thorough cultivation. Omissions of any one factor or of any combination of factors in the highly complex field of modern farming will lead to reducing the credit rating that can be enjoyed in the production of food and fiber by farmers today. It is cheaper to be able to have credit and make that credit work than it is to own capital. The proper applications and use of credits are the tools now used by farmers in the accumulation of capital and wealth. Without credit, the modern farmers would have little to offer in our present-day economy.—Claude Arce-neaux, manager of the farm department, Guaranty Bank and Trust Co., Lafayette, Ind., in recent issue of "Chilean Nitrate Farm Forum."



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MEETING MEMOS

Oct. 10-12—Association of Official Agricultural Chemists, Annual Meeting, Shoreham Hotel, Washington, D.C., Dr. William Horwitz, Box 540, Benjamin Franklin Station, Washington 4, D.C., Secretary.

Oct. 11—Western Agricultural Chemists Assn., Annual Meeting, Hotel Claremont, Berkeley, Cal., C. O. Barnard, 2466 Kenwood Ave., San Jose, Cal., Executive Secretary.

Oct. 13-14—National Nitrogen Solutions Assn., Meeting and Equipment Display, Illinois State Armory, Springfield, Ill., Roy F. Broymill, Dakota City, Neb., Meeting Chairman.

Oct. 13-14—Canadian Agricultural Chemicals Assn., Third Annual Meeting, the Chantecleer, Ste-Adele-en-haut, Quebec.

Oct. 14—Association of American Fertilizer Control Officials, Annual Meeting, Shoreham Hotel, Washington, D.C., B. D. Cloaninger, Drawer 392, Clemson, S.C., Secretary-Treasurer.

Oct. 17-18—Fertilizer Section, National Safety Congress, LaSalle Hotel, Chicago; Thomas J. Clarke, Chairman.

Oct. 18-19—Seventh Annual Washington Aerial Spraying and Dusting Conference, Cascadian Hotel, Wenatchee, Wash.

Oct. 19-21—International Conference on Use of Antibiotics in Agriculture, Jefferson Memorial Auditorium, U.S. Department of Agriculture, Washington, D.C.

Oct. 24—Salesmen's Association of the American Chemical Industry, Fourth Annual Sales Clinic, Roosevelt Hotel, New York.

Oct. 26-28—Mississippi Fertilizer Conference, Buena Vista Hotel, Biloxi, Miss.

Oct. 27—Middle West Soil Improvement Committee, Annual Meeting, Sherman Hotel, Chicago; Z. H. Peers, Executive Secretary, 228 N. LaSalle St., Chicago, Ill.

Oct. 31—Nebraska Fertilizer Institute, Inc., First Annual Convention, Cornhusker Hotel, Lincoln, Howard W. Elm, Executive Secretary, 917 Trust Bldg., Lincoln 8, Neb.

Oct. 31-Nov. 3—United Kingdom National Crop Protection Conference, Eastbourne, England.

Nov. 2-3—Annual Convention, Pacific Northwest Plant Food Assn., Pilot Butte Inn, Bend, Ore.; Leon Jackson, 702 Lewis Bldg., Portland, Ore., Secretary.

Nov. 2-5—Third annual Mid-Atlantic Farm and Home Show, Convention Hall, Atlantic City, N.J.; William A. Haffert, Jr., Sea Isle City, N.J., executive vice president.

Nov. 3-4—Northeastern Division, American Phytopathological Society, Eastern States Farmers Exchange, Inc., 26 Central St., West Springfield, Mass. B. H. Davis, Department of Plant Pathology, Rutgers University, New Brunswick, N.J., secretary.

Nov. 4—Fertilizer Section, South Carolina Annual Accident-Prevention Conference, Hotel Francis Marion, Charleston, S.C.; Anton L. Foster, International Minerals & Chemical Corp., General Chairman.

Nov. 6-8—California Fertilizer Assn., Thirty-second Annual Convention, Hotel Mark Hopkins, San Francisco; Sidney H. Bierly, Executive Secretary and Manager, 475 Huntington Drive, San Marino, Cal.

Nov. 8-10—17th Annual New York State Insecticide, Fungicide and Application Equipment Conferences; Bibbins Hall, G.L.F. Exchange, Ithaca, N.Y.; O. E. Palm, Cornell University, Ithaca.

Nov. 16—Pesticide Dealers Conference, Rutgers University, New Brunswick.

Nov. 16-17—Ohio Pesticide Institute's Ninth Annual School and Conference, Ft. Hayes Hotel, Columbus, Ohio. J. D. Wilson, Ohio Agricultural Experiment Station, Wooster, Secretary.

Nov. 22—Manufacturing Chemists' Assn., Semi-Annual Meeting and Winter Conference, Statler Hotel, New York.

Nov. 29-30—Land Use Forum, Kansas State College, Manhattan, Kansas, Dr. R. V. Olson, Kansas State College, Chairman, Arrangements Committee.

Nov. 29-Dec. 2—Entomological Society of America, Netherlands Plaza Hotel, Cincinnati.

Dec. 5—Soils & Fertilizer Short Course, Institute of Agriculture, University of Minnesota, St. Paul Campus.

Dec. 5-7—Agricultural Ammonia Institute, Kansas City; Jack F. Criswell, Executive Vice President, Claridge Hotel, Memphis, Tenn.

Dec. 5-7—Chemical Specialties Manufacturers Assn., 42nd Annual Convention, Roosevelt Hotel, New York; H. W. Hamilton, 50 E. 41st St., New York 17, N.Y., Executive Secretary.

Dec. 8-9—Michigan Fertilizer and Lime Conference, Michigan State College, East Lansing.

Dec. 15-16—Beltwide Cotton Production Conference, Hotel Peabody, Memphis, Sponsored by the National Cotton Council.

Dec. 28-30—American Phytopathological Society, Atlanta, Ga.; Glenn S. Pound, University of Wisconsin, Madison, Wis., Secretary.

Dec. 29—Symposium on Health Hazards of Chemicals, before the Pharmacy Section at Annual Meeting of American Association for the Advancement of Science, Atlanta.

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Jan. 4-6—Weed Society of America, Charter Meeting, Hotel New Yorker, New York; W. C. Shaw, U.S. Department of Agriculture, Beltsville, Md., Secretary-Treasurer.

Jan. 10-11—Eighth Annual North Carolina Pesticide School, North Carolina State College, Raleigh.

Jan. 15-17—New Mexico Grain & Feed Dealers Assn., Annual Convention, Hilton Hotel, Albuquerque, with Special Portion for Fertilizer and Farm Chemical Dealers; H. B. Henning, Albuquerque, Secretary.

Jan. 16-18—Southern Weed Conference, Ninth Annual Meeting, Hotel Jung, New Orleans; Dr. E. G. Rodgers, Florida Agricultural Experiment Station, Gainesville, Secretary-Treasurer.

Jan. 26-29—Agricultural Aircraft Assn., Inc., Sixth Annual Convention, Wilton Hotel, Long Beach,

Cal.; Wanda Branstetter, Route 3, Box 1077, Sacramento, Cal., Executive Secretary.

Feb. 6-8—Cotton States Branch, Entomological Society of America, Biltmore Hotel, Atlanta, Ga. W. G. Eden, Alabama Polytechnic Institute, Auburn, Ala., secretary-treasurer.

Feb. 7-9—National Garden Supply Trade Show, Kingsbridge Armory, New York City.

Feb. 15-17—California Weed Control Conference, Sacramento and Davis, Cal.; Oliver A. Leonard, Botany Dept., University of California, Davis, Cal., Secretary.

Feb. 15-17—Western Weed Control Conference, Sacramento and Davis, Cal.; W. C. Robacker, U.S. Department of Agriculture, Nevada Agricultural Experiment Station, Reno, Nev., Secretary-Treasurer.

March 14-18—National Agricultural Chemicals Assn., Spring Meeting, Hollywood Beach Hotel, Hollywood, Fla., Lea S. Hitchner, NAC Executive Secretary, 1145 19th St. N.W., Washington 6, D.C.

June 28-30—Association of Southern Feed & Fertilizer Control Officials, 14th Annual Convention, Hotel Roanoke, Roanoke, Va.; Bruce Poundstone, Kentucky Agricultural Experiment Station, Lexington, Ky., Secretary-Treasurer.

June 28-30—Seventh Regional Fertilizer Conference of the Pacific Northwest, Chinook Hotel, Yakima, Wash.

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